Guide to the Federal Reserve's Payments System Risk Policy

Federal Reserve System
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Preface

This manual was developed to assist depository institutions in complying with the policies of the Board of Governors of the Federal Reserve System aimed at controlling and reducing risks in payments systems. These policies, known collectively as the Payments System Risk, or PSR, program, focus particular attention on the use of intraday credit, commonly called Adaylight overdrafts,@ by institutions that maintain accounts at Federal Reserve Banks.

This document contains detailed information on the steps necessary to comply with the portion of the Federal Reserve's PSR policy that requires institutions that use Federal Reserve intraday credit to establish a net debit cap on their daylight overdrafts. The manual also contains information on monitoring and controlling risks that arise in processing payments. Even those institutions that use only minimal amounts of intraday Federal Reserve credit should have the capability to monitor their Federal Reserve account balances on an intraday basis, and should understand the risks inherent in the provision of payment services generally.

Users of this manual should be aware that the information contained in it is based on the current PSR program at the time of publication. Should the Federal Reserve find it necessary to modify its PSR policies in the future, the policy statements issued by the Board of Governors would supersede the information in the manual until it could be updated accordingly. In addition, for policies described but not yet in effect at the time of publication of this manual, the effective date is clearly specified in the text.

This manual is divided into seven sections and a set of appendices:

- **Section I** presents background information and a general summary of the PSR program;
- **Section II** contains information that will enable depository institutions to deter-mine the most appropriate method of complying with the Federal Reserve's policy on daylight overdraft net debit caps;
- **Section III** covers measurement and monitoring of daylight overdrafts in Federal Reserve accounts;
- **Section IV** provides information on fees that the Federal Reserve is charging for daylight overdrafts;
- **Section V** provides information on provisions of the PSR policy related to special types of institutions;
- **Section VI** provides information useful for those institutions choosing to establish a net debit cap in one of the categories that requires a self-assessment;

- **Section VII** contains a discussion of risks that arise in the provision of payment services;

- The **Appendices** provide supplementary and reference information that may be needed by users of the manual, including self-assessment worksheets and sample letters and resolutions, as well as other information related to the PSR policy; and

- The **Glossary** is intended to help users understand terminology used in the manual.

I. Introduction

In 1985, the Board of Governors of the Federal Reserve System adopted a policy to reduce the risks that large-dollar payments systems presented to the Federal Reserve Banks, to the banking system, and to other sectors of the economy. An integral component of the Federal Reserve's Payments System Risk, or PSR, policy is a program to control the usage of intraday Federal Reserve credit, commonly referred to as Adaylight credit@ or Adaylight overdrafts,@ which is the primary focus of this manual.

Policy History

The Federal Reserve first published a policy statement on risks in large-dollar wire transfer systems in 1985. This policy required all institutions incurring daylight overdrafts in their Federal Reserve accounts as a result of Fedwire funds transfers to establish a maximum limit, or net debit cap, on those overdrafts.

In subsequent years, the Federal Reserve expanded the original PSR policy by addressing the control of risks in activities such as automated clearing house (ACH), book-entry securities transfers, large-dollar multilateral netting systems, certain private securities clearing and settlement systems, and third-party access to Fedwire. In addition, the Federal Reserve has made a number of modifications to the original program, such as creation of an exempt status for institutions that incur only minimal daylight overdrafts, and reductions in the multiples of capital that determine the net debit caps.

In 1992, the Board of Governors approved a policy that established fees to be assessed for institutions' use of Federal Reserve daylight credit beginning in April 1994. Along with the daylight overdraft fee policy, the Federal Reserve adopted a modified method of measuring daylight overdrafts that more closely reflects the timing of actual transactions affecting an institution's intraday Federal Reserve account balance. This new measurement method incorporates specific account posting times for different types of transactions.

Objectives of the PSR Policy

As in the case of private institutions that offer payment services to customers, Federal Reserve Banks may be exposed to the risk of loss when they process payments for institutions that hold accounts with them. The Federal Reserve guarantees payment on transactions made by account-holders over the Fedwire funds and securities transfer systems. If an institution were to fail after sending a funds transfer that left its account in an overdraft position, the Federal Reserve would be obligated to cover the payment and bear any resulting losses. Risk of loss is present even when an institution overdraws its account at a Reserve Bank only for a few minutes during the day. The Federal Reserve's exposure is not insignificant. The total of depository institutions' peak daylight overdrafts in Federal Reserve accounts was approximately $65 billion per day, on average, during 1996.

Similar types of risk are generated by the intraday overdrafts of customers of private financial institutions and by participants in private payment arrangements. In addition, daylight credit may be a

source of systemic risk in the payment system. Systemic risk refers to the potential transmission of one institution's inability to discharge its payment obligations through the payment system to many other institutions in the financial markets. Systemic risk has the potential to affect broader economic activity as well.

The Federal Reserve Board's PSR program is intended to assist Reserve Banks and depository institutions in controlling these risks. The PSR policy established limits on the amount of Federal Reserve daylight credit that may be used by a depository institution during a single day or over a two-week period. These limits are sufficiently flexible to reflect the overall financial condition and operational capacity of each institution using Federal Reserve payment services. The policy also permits Reserve Banks to protect themselves from the risk of loss by requiring collateral to cover daylight overdrafts in certain circumstances, or by restricting the account activity of institutions that incur frequent, excessive overdrafts.

The objective of the fees that the Federal Reserve is charging for daylight overdrafts is to provide a financial incentive for institutions to control their use of intraday Federal Reserve credit and to recognize explicitly the risks inherent in the provision of intraday credit. Once they are subject to the daylight overdraft fees, institutions may be induced to make business decisions concerning the amount of intraday Federal Reserve credit they are willing to use based on the cost of using that credit. These decisions could include establishing intraday credit limits for customers that use payment services actively, if such limits do not currently exist.

The method used to measure daylight overdrafts and assess fees incorporates a set of nearly real-time transaction posting rules, which should result in greater consistency between the time that transactions are processed by the Reserve Banks and the time that these transactions are posted to institutions' accounts during the day.

Daylight Overdrafts

A daylight overdraft occurs at any point in the business day when the balance in an institution's account becomes negative. Daylight overdrafts can occur in accounts at Reserve Banks as well as at private financial institutions. A daylight overdraft occurs at a Reserve Bank when there are insufficient funds in an institution's Federal Reserve account to cover outgoing funds transfers or incoming book-entry securities transfers, or as a result of other payment activity processed by the Reserve Bank, such as check or ACH transactions.

For purposes of measuring daylight overdrafts in Federal Reserve accounts, the Federal Reserve uses a special accounting methodology for posting debits and credits that result from various transactions, which is discussed in Section III. Fedwire funds and securities transfers, are posted to an institution's account as they occur. Other transactions processed by Reserve Banks are posted according to type at specified times during the day. The account balance is measured at the end of each minute during the business day; the end-of-minute balances are used by Reserve Banks for determining compliance with net debit caps and for calculating daylight overdraft fees.

Net Debit Caps

Under the Federal Reserve's PSR policy, all institutions that maintain a Federal Reserve account are assigned or may establish a net debit cap that represents a maximum limit on the daylight overdrafts incurred in that account. Net debit caps fall into six different cap categories that correspond to different degrees of intraday credit usage. *All cap categories, including the exempt status, are granted at the discretion of the Reserve Banks.*

Several of these categories require an institution's board of directors to submit annually a resolution authorizing a certain level of daylight overdrafts. The categories that allow the highest usage of intraday Federal Reserve credit also require an institution to perform a self-assessment of its own financial and operational capacity. The process of filing a cap resolution is discussed in Section II, and the self-assessment process is presented in Section VI. The Appendices also contain sample resolutions, worksheets that institutions may use in completing a self-assessment, and other information designed to assist institutions in the process of establishing a net debit cap.

Financially healthy institutions that do not incur daylight overdrafts in their Federal Reserve accounts, or incur overdrafts of up to the lesser of $10 million or 20 percent of their risk-based capital, are generally exempt from filing a resolution or performing a self-assessment. However, these institutions may also find it helpful to review the self-assessment procedures in Section VI, which contain information on evaluating the effectiveness of controls over processing of payments.

In order to comply with the PSR policy on net debit caps, an institution can ensure that its use of intraday credit does not exceed the AExempt-from-filing@ limits, or it can file an appropriate cap resolution with its local Reserve Bank and control its daylight overdrafts to remain within its cap. In addition, the PSR policy applies separate standards for compliance of certain types of institutions, such as those in weakened financial condition, or those considered to be special situations, as discussed in Section V.

Daylight Overdraft Fees

Effective with the reserve maintenance period beginning April 14, 1994, the Federal Reserve began charging fees for daylight overdrafts. The fee and its calculation are discussed in Section IV. The fee was increased to 36 basis points on April 13, 1995, for a minimum of two years. The effective annual rate is adjusted downward to cover only the fraction of the day that Fedwire operates. The overdraft fee is applied to a measure of average daily overdrafts for each institution less a deductible amount, which is related to an institution's capital.

II. Daylight Overdraft Net Debit Caps

Under the Federal Reserve's PSR program, each institution that maintains an account at a Federal Reserve Bank is assigned or may establish a net debit cap, which determines the amount of intraday Federal Reserve credit that the institution may use. The policy allows financially healthy depository institutions that are eligible for access to the discount window to incur daylight overdrafts in their Federal Reserve accounts up to each institution's cap.

This section discusses issues relevant to establishing a cap, such as different cap categories, responsibilities of a depository institution's board of directors, procedures for filing a cap resolution, and the role of regulatory agencies. Institutions that may be considered Aspecial situations@ should consult Section V for more information on net debit caps.[1]

A. Net Debit Caps

An institution's net debit cap, or cap, refers to the maximum dollar amount of uncollateralized daylight overdrafts that the institution may incur in its Federal Reserve account. The size of the net debit cap is determined by an institution's cap category, or class, and its reported capital.[2] There are six cap categories: Zero, Exempt-from-filing, *De minimis*, Average, Above average, and High. Each cap category is associated with cap multiples, which are shown in Table II-1, below.

An institution's net debit cap, sometimes referred to as its daylight overdraft capacity, is calculated

Net debit cap = Cap multiple x Capital.

as its cap multiple times its risk-based capital:

Depending on its cap category, an institution may have two different cap multiples, one for its maximum allowable overdraft on any day (Asingle-day cap@), and one for the maximum allowable average of its peak daily overdrafts in a two-week period (Atwo-week average cap@). Institutions in the Zero, Exempt-from-filing, and *De minimis* cap categories have a single cap that applies to both the single-day peak overdraft and the average peak overdraft for a two-week period.

[1] Institutions considered Aspecial situations@ include U.S. branches and agencies of foreign banks, nonbank banks, industrial banks, institutions without access to the discount window, and institutions involved in inter-affiliate transfer or third-party access arrangements.

[2] Information on capital measures for different types of institutions and related regulatory reports is provided in Appendix C.

Because the dollar amount of a net debit cap is a function of an institution's capital, the cap will vary over time as the institution's capital changes. However, an institution's cap category is normally fixed over a one-year period.

Table II-1
Cap Multiple Matrix

Cap Categories	Cap Multiples	
	Single Day	Two-Week Average
Zero	0	0
Exempt-from-filing*	$10 million/0.20	$10 million/0.20
De Minimis	0.40	0.40
Average	1.125	0.75
Above average	1.875	1.125
High	2.25	1.50

* The net debit cap for the Exempt-from-filing category is equal to the **lesser** of $10 million or 0.20 multiplied by risk-based capital.

B. Cap Categories

An institution can establish its cap category by filing a board-of-directors' resolution (cap resolution) with its Reserve Bank, or it can be assigned a cap category by its Reserve Bank. Generally, only those institutions that regularly incur daylight overdrafts of more than $10 million or 20 percent of their risk-based capital on a single-day or two-week average basis are required to file a cap resolution. Institutions that do not file cap resolutions are assigned either the Exempt-from-filing or Zero cap category. An institution that has not filed a resolution may not be aware of its assigned cap category and may contact its Reserve Bank to obtain this information.

Zero cap

An institution in the Zero cap category has a net debit cap of zero and thus may not incur daylight overdrafts in its Federal Reserve account, although in some cases it may be permitted to incur overdrafts provided they are fully collateralized, as discussed in Section III. Some institutions have established management policies that prohibit daylight overdrafts. Such institutions may wish to adopt a voluntary Zero cap, but they are not required by Federal Reserve policy to do so. An institution that desires to adopt a Zero cap may do so by sending a letter to its Reserve Bank. The cap will remain in effect until a cap

resolution for a different cap category is filed by the institution, or until the institution becomes eligible for the Exempt-from-filing status and requests that the Reserve Bank assign it to the Exempt category.

In addition, an institution may be assigned a Zero cap by its Reserve Bank. Institutions that may pose special risks to the Reserve Bank, such as those without access to the discount window, those incurring daylight overdrafts in violation of the Federal Reserve's PSR policy, or those in financially weakened condition, are generally assigned a Zero cap. Newly chartered institutions may also be assigned to the Zero cap category. An institution that has been assigned a Zero cap as a result of recurring daylight overdrafts in excess of its cap may generally file a resolution for a higher cap if the institution is considered to be in healthy financial condition. An institution with a Zero cap should confirm its eligibility for a positive cap with the Reserve Bank before proceeding to obtain board of directors approval of a *De minimis* cap or before beginning a self-assessment.

Exempt-from-filing

The Exempt-from-filing category permits depository institutions to incur daylight overdrafts up to a net debit cap of $10 million or 20 percent of their risk-based capital, whichever amount is smaller. If a Reserve Bank determines that an institution is eligible for exempt status, it will assign this category without requiring any additional documentation. As a result, the Exempt-from-filing cap category substantially reduces the administrative burden associated with obtaining a net debit cap. The majority of depository institutions that hold Federal Reserve accounts are granted this exempt status.

The exempt status is granted at the discretion of the Reserve Bank. To be eligible for the Exempt-from-filing category, an institution must be in healthy financial condition, and it should use only minimal amounts of intraday Federal Reserve credit. Specifically, an institution's daylight overdraft history should show only rare overdrafts of more than $10 million or 20 percent of its risk-based capital, whichever amount is smaller. Any overdrafts above this limit should occur no more than twice in a four-week period (two consecutive two-week reserve maintenance periods). An institution may contact its Reserve Bank for verification that it has been granted or is eligible for the exempt status.

A depository institution with a new Federal Reserve account may be eligible for exempt status if it is considered to be in healthy financial condition. Furthermore, if an institution assigned the Exempt-from-filing cap category later determines that it requires more daylight overdraft capacity, it may file a cap resolution, described below, to increase its net debit cap. Institutions in the Exempt-from-filing cap category are not required to renew their caps annually.

De minimis cap

Each financially healthy depository institution that regularly incurs daylight overdrafts in excess of the Exempt-from-filing limitations must file a resolution with its Reserve Bank for a cap category that accommodates its normal use of intraday credit. The *De minimis* cap category allows institutions to incur peak daily and two-week average daylight overdrafts up to a cap of 40 percent of risk-based capital. This category was designed to reduce the burden of performing a self-assessment for those institutions incurring relatively small levels of daylight overdrafts.

In order to establish the *De minimis* cap category, an institution's board of directors must submit a cap resolution to the Reserve Bank. This resolution must approve the institution's use of intraday Federal Reserve credit in an amount up to 40 percent of its capital. (A sample resolution is provided in Appendix B.)

Self-assessment caps

Depository institutions that use intraday Federal Reserve credit in amounts that exceed levels permitted by an exempt or *De minimis* cap on a single-day or on average over a two-week period must establish their daylight overdraft caps through the self-assessment process. This process is required in order to establish a cap in any one of the Average, Above average, or High categories. These caps are based on higher multiples of capital than those for the Exempt or *De minimis* cap categories and, therefore, permit relatively higher overdrafts.

Details of the self-assessment process are provided in Section VI and Appendix A of this manual. Other institutions, such as those in the Zero, Exempt-from-filing, or the *De minimis* cap categories, may also find it helpful to review certain sections of the self-assessment procedures, which contain information on evaluating the effectiveness of controls over payments processing.

In performing a self-assessment, an institution must evaluate four factors: credit-worthiness; intraday funds management and controls; customer credit policies and controls; and operating controls and contingency procedures. The results of the self-assessment determine the appropriate cap category for the institution.

Once completed, the results of the self-assessment must be reviewed and approved by the institution's board of directors. The directors' approval must be communicated to the Reserve Bank by submission of a board-of-directors' resolution. The Reserve Bank will then review the cap resolution for appropriateness, in conjunction with the institution's primary regulator. Should the Reserve Bank determine that the cap resolution is not appropriate, the institution will be informed that it should reevaluate its self-assessment and submit another resolution.

An institution that experiences a significant change in its financial condition or organizational structure, such as a merger, acquisition, large charge-off, or increase in loan loss reserves, is required to review its current cap category with particular focus on creditworthiness standards. A resolution to establish a different cap category may be submitted by the institution, or may be required by the Reserve Bank, before the annual renewal date if circumstances warrant such a change.

C. Role of Directors

The directors of a depository institution establish and implement policies to ensure that its management follows safe and sound operating practices, complies with applicable banking laws, and prudently manages financial risks. Given these responsibilities, the directors play a vital role in the Federal Reserve's efforts to reduce risks within the payment system.

As part of the PSR policy, the Federal Reserve requests that directors, at a minimum, undertake the following responsibilities:

- **$** Understand the depository institution's practices and controls regarding risks assumed when processing large-dollar transactions for both its own account and the accounts of its customers or respondents;

- **$** Establish prudent limits on the net debit positions that the institution incurs in its Federal Reserve account and on privately operated clearing and settlement systems; and

- **$** Periodically review the frequency and dollar levels of daylight overdrafts to ensure that the institution operates within the guidelines established by its board of directors. Directors should be aware that, under the Federal Reserve's PSR policy, repeated violations of the institution's daylight overdraft net debit cap could lead to reductions in the cap, as well as the imposition of restrictions on its Federal Reserve account activity that could affect the institution's operations.

Each institution that performs a self-assessment for a net debit cap should establish daylight overdraft policies and controls after considering its creditworthiness, intraday funds management and control, customer credit policies and controls, and operating controls and contingency procedures. Additional policies and controls must be established if the institution has inter-affiliate funds transfer arrangements or uses third-party service providers. (Refer to Section V for additional details.)

The directors may appoint a committee of directors to focus on the institution's participation in payment systems and its use of daylight credit. Furthermore, a higher level board of the same corporate family may conduct a self-assessment review, if necessary, and approve a cap resolution. For example, the board of directors of the parent company of a bank holding company may review the self-assessment and adopt a cap for one or more of its banking or Edge corporation subsidiaries. The board of directors should be aware that delegating the review process to a committee or higher level board does not absolve the directors from the responsibilities outlined in the Federal Reserve's PSR policy. The directors cannot delegate this responsibility to an outside consultant or third-party service provider.

The Federal Reserve recognizes that directors of foreign banks do not necessarily serve in the same capacity as directors of banks in the United States. Therefore, individuals who are responsible for formulating policy at the foreign bank's head office may substitute for directors in performing the responsibilities specified in the PSR policy.

D. Cap Resolutions

A board-of-directors' resolution is required to establish a cap in the *De minimis*, Average, Above average, or High cap categories. These resolutions must follow a prescribed format.
Specifically, resolutions must include the following: (1) the official name of the institution; (2) the city and state in which the institution is located; (3) the date the board acted; (4) the cap category adopted; (5) the

appropriate official signature; (6) the ABA routing number of the institution; and (7) the corporate seal. For a board resolution approving the results of a self-assessment, the resolution must identify the ratings assigned to each of the four components of the assessment as well as the overall rating used to determine the actual net debit cap. In addition, significant liquidity or holding company factors may be addressed in the resolution; the institution should also indicate if it did not use the Creditworthiness Matrix approach in determining its creditworthiness rating. (Sample resolutions are included in Appendix B.)

Cap resolutions may be reviewed by the depository institution's primary supervisor, and information and any materials used by the institution's directors in fulfilling their responsibilities under the PSR policy must be made available to the institution's supervisory examiners. Supporting documentation used in determining an appropriate cap category must be maintained at the institution. At a minimum, the following items must be maintained in the institution's Acap resolution file:@

- An executed copy of the resolution adopting the net debit cap;
- Copies of management's self-assessment of creditworthiness, intraday funds management and control, customer credit policies and controls, and operating controls and contingency procedures;
- Minutes and other documentation that serve as a formal record of any discussions of the self-assessment by the directors;
- Status reports made available to the board of directors regarding the depository institution's compliance with resolutions adopted by the directors as well as with the PSR policy; and
- Other materials that provide insight into the directors' involvement in carrying out their responsibilities under the PSR policy, including special studies or presentations made to the directors.

De minimis and self-assessment cap resolutions are valid for one year after the date of the resolution. An institution with a *De minimis* cap must renew its cap resolution annually by submitting a new resolution. An institution with a self-assessment cap must perform a new self-assessment annually and submit an updated cap resolution. Procedures for submitting this resolution are the same as those for establishing a new cap; however, an institution may submit a cap resolution for a different cap category than its existing category if appropriate. Each resolution to renew a cap is also reviewed for appropriateness by the Reserve Bank, in conjunction with an institution's primary supervisor.

Because the self-assessment process may, in some cases, require considerable time to complete and approve, institutions should be aware of the expiration date of their cap resolutions well in advance. If a new cap resolution is not received by the expiration date, an institution may be assigned a Zero cap, which would generally preclude any use of daylight credit in the institution's Federal Reserve account.

E. Confidentiality of Caps

The Federal Reserve considers institutions' daylight overdraft caps and cap categories to be confidential information and will only share this information with an institution's primary supervisor. Institutions are also expected to treat cap information as confidential. Cap information should not be shared with outside parties or mentioned in any public documents.

III. Daylight Overdraft Monitoring and Management

This section, which is applicable to all institutions regardless of their net debit cap categories, provides information on the measurement of daylight overdrafts, counseling for cap violations, real-time monitoring, and pledging of collateral for daylight overdraft purposes.

A. Daylight Overdraft Measurement

To determine whether a daylight overdraft has occurred in a depository institution's account, the Federal Reserve uses a set of transaction posting rules which define explicitly the time of day that debits and credits from various transactions are posted to the account. Such debits and credits result from Fedwire funds transfers, Fedwire book-entry securities transfers, and all non-Fedwire transactions processed by a Reserve Bank. In general, all Fedwire funds and book-entry securities transfers are posted to an institution's account as they occur throughout the day. For non-Fedwire transactions, quasi-real-time posting rules in effect since October 14, 1993, govern the timing of account debits and credits. These posting rules should help institutions control their use of intraday credit because they can monitor the time that each transaction is credited or debited to their account. Note that these posting times affect the calculation of the account balance for daylight overdraft monitoring and pricing purposes but do not affect the finality or revocability of the entry to the account. An important feature of the posting rules is a choice of posting times for check credits. Information on check crediting options and specific posting times for various transactions are provided in Appendix D.

To monitor an institution's overdraft activity and its compliance with the PSR policy and to calculate daylight overdraft charges, the Federal Reserve has developed the Daylight Overdraft Reporting and Pricing System (DORPS). DORPS captures all debits and credits resulting from an institution's payment activity and calculates end-of-minute account balances using the daylight overdraft posting rules. Sample annotated reports generated by DORPS that Reserve Banks may provide to institutions incurring overdrafts can be found in part D of this section.

B. Monitoring Compliance with the PSR Policy

Reserve Banks generally monitor institutions' compliance with the PSR policy over each two-week reserve maintenance period. A cap breach occurs when an institution's account balance for a particular day shows one or more negative end-of-minute account balances in excess of its single-day net debit cap. In addition, a cap breach would occur if an institution's average peak daily overdraft over a reserve maintenance period, calculated by adding together the largest overdraft, if any, incurred for each day during a reserve maintenance period and dividing that sum by the number of business days in the period, were greater than its two-week average cap.

Institutions with more than one Federal Reserve account are monitored on a consolidated basis; that is, a single account balance is derived by adding together the end-of-minute balances of each account. The accounts of affiliated institutions are monitored separately if they are separate legal entities. In addition, for institutions with accounts in more than one Federal Reserve District, an

Administrative Reserve Bank (ARB) is designated. The ARB coordinates the Federal Reserve's daylight overdraft monitoring activities for the consolidated accounts or institutions, such as the branches and agencies of a foreign bank. Typically, the ARB is the Reserve Bank in the Federal Reserve District where the consolidated entity has its leading presence.

For example, consider a foreign bank family with branches or agencies in New York, Chicago, and San Francisco. Assume that the New York Reserve Bank is the ARB for the foreign bank. The family's intraday position at selected intervals might be as follows ($ in millions):

Time	New York	Chicago	San Francisco	Consolidated
10 a.m.	($10)	$5	$15	$10
12 p.m.	($20)	$5	$15	$0
2 p.m.	($30)	$10	$15	($5)

When considered on a consolidated basis, overdrafts by the New York branch are offset by positive balances in by the Chicago and San Francisco branches except at 2 p.m. As the ARB, the New York Reserve Bank would compare the bank's consolidated position to the dollar value of its single-day net debit cap and would notify the New York branch of the foreign bank if the overdraft exceeded the cap.

Institutions in the Exempt-from-filing cap category are normally allowed two cap breaches in two consecutive two-week reserve maintenance periods without violating the PSR policy. For institutions in the *De minimis* or self-assessment cap categories, each cap breach resulting from funds transfer activity is considered a policy violation, but infrequent overdrafts in excess of cap that are related to Fedwire book-entry securities transfer activity are permitted, within limits described below. In addition, a Reserve Bank may waive a cap violation if it determines that the overdraft resulted from circumstances beyond the institution's control, such as an operational failure on the part of a Reserve Bank.

Overdrafts caused by book-entry securities transfers

Book-entry securities transactions over Fedwire are initiated by the institution sending the securities. The receiving institution may not, therefore, be able to control the time that securities are delivered to its securities account and that its funds account is correspondingly debited. As a result, daylight overdrafts caused by book-entry securities transfers are monitored separately. For each institution, DORPS calculates a separate end-of-minute account balance using debits and credits resulting only from book-entry securities transfer activity. This allows Reserve Banks to determine if a particular daylight overdraft was caused by book-entry securities activity.

The Federal Reserve allows institutions to increase their effective daylight overdraft capacity by pledging collateral to cover all or a portion of their book-entry securities-related overdrafts (Abook-entry overdrafts@). Such secured book-entry overdrafts are excluded from the calculation of overdrafts subject to the net debit cap, thereby increasing the amount of capacity available for funds transfer and other activity. Regardless of collateral pledged, however, institutions generally may not increase their capacity for overdrafts that are not caused by book-entry securities transfer activity above their net debit cap.

Furthermore, if an institution incurs book-entry overdrafts that are considered Afrequent and material,@ the institution will be required to collateralize fully all of its book-entry overdrafts. For an institution's book-entry overdrafts to be considered Afrequent,@ such overdrafts must occur on more than three days in two consecutive reserve maintenance periods. To be considered Amaterial@ an overdraft must be more than 10 percent above the institution's net debit cap, and the book-entry related portion of the overdraft must be more than 10 percent of the cap. Once an institution incurs frequent and material book-entry overdrafts, it will be required to pledge collateral to cover all book-entry overdrafts for six reserve maintenance periods after its last material book-entry overdraft occurred.

Even if a depository institution voluntarily pledges collateral for book-entry overdraft purposes, these collateralized book-entry overdrafts are not excluded from the calculation of frequency and materiality. An institution that voluntarily pledges collateral for book-entry overdraft purposes may be required by its Reserve Bank to pledge collateral to cover fully its peak book-entry overdraft if the overdrafts in excess of its cap become frequent and material.

Depository institutions that are required to pledge collateral to cover all book-entry overdrafts or that voluntarily collateralize book-entry overdraft activity may pledge excess discount window collateral (collateral pledged to the Reserve Bank for overnight borrowing purposes that is not already securing a loan), some other pool of stable collateral, or both. AIn-transit@ book-entry securities, that is, the incoming securities that cause the daylight overdraft, may be used as collateral subject to an agreement between the depository institution and its Reserve Bank. A depository institution that chooses to utilize in-transit securities as collateral must agree to provide adequate records of the pledge to the Reserve Bank and to allow the Reserve Bank to audit such collateral records periodically.

Consequences of cap violations

A daylight overdraft cap violation may initiate a series of actions by the Reserve Bank aimed at deterring future cap violations. These actions depend on the size and frequency of the overdrafts and on the financial condition of the institution. Initial actions taken by the Reserve Bank may include an assessment of the causes of the overdraft and a review of account management practices. An institution may be required to submit documentation specifying actions to be taken to address the overdraft problems.

If cap violations continue to occur, an institution may be required to increase clearing balances or pledge collateral to cover its overdrafts. For a healthy institution in the Exempt-from-filing, voluntary Zero, or *De minimis* cap categories, the Reserve Banks may recommend that the institution perform a self-assessment and file a cap resolution to obtain a higher net debit cap. Alternatively, the Reserve Bank may assign the institution a Zero cap. In this situation, an institution could also face account activity restrictions,

such as rejection of Fedwire funds transfers in excess of the account balance, or account prefunding requirements for non-Fedwire activities, such as check, ACH, and currency transactions.

Institutions are responsible for advising their board of directors of any daylight overdraft cap policy violations. Reserve Banks will also keep institutions' primary regulators apprised of any recurring overdraft problems.

C. Real-time Monitoring and the Account Balance Monitoring System

The Account Balance Monitoring System, or ABMS, is the tool used by Reserve Banks to monitor in real time the payment activity of institutions that potentially expose the Federal Reserve and other payment system participants to risk of loss. To reduce the risks that institutions in deteriorating financial condition or institutions with a history of excessive overdraft activity may pose to the Federal Reserve and the payment system, Reserve Banks may apply Areal-time monitoring@ to an institution's account. Real-time monitoring, which relies on the capability of ABMS to intercept or reject funds transfers, may be utilized to prevent an institution from transferring funds from its account if there are insufficient funds to cover the payment.

If an institution is placed in Areject@ mode in ABMS, any outgoing Fedwire funds transfers that would cause an overdraft above a specified threshold, such as the institution's net debit cap plus, in some cases, any collateral pledged, would be immediately rejected back to the sending institution. The institution could then initiate the transfer again when sufficient funds became available in its account. If an institution is monitored in the Aintercept@ mode, sometimes referred to as the Apend@ mode, outgoing funds transfers that would cause an overdraft in excess of the threshold will not be processed but will be held in a queue. These intercepted wire transfers will be either released by the Reserve Bank for processing once funds are available in the institution's account or rejected back to the institution. Reserve Banks will normally be in direct contact with an institution in the event that any of its funds transfers are intercepted or rejected.

Institutions will generally be notified prior to being placed in reject or intercept mode in ABMS. This designation may be suspended once the Reserve Bank determines that the institution's use of intraday Federal Reserve credit no longer constitutes a significant risk. On the other hand, if the Reserve Bank determines that the institution continues to pose excessive risk, either due to excessive cap breaches or deteriorating financial condition, the Reserve Bank may take further action (for example, requiring larger clearing balances or collateral) to limit this risk.

In addition to its risk reduction application, ABMS may be utilized by institutions that use the on-line funds transfer services to review their intraday account balances and to help control their use of Federal Reserve intraday credit. While ABMS is not a substitute for an institution's own internal tracking and monitoring systems, it does provide real-time account information based on Fedwire funds and securities transfers. Additionally, debits and credits resulting from an institution's non-Fedwire payment activity are captured by ABMS after the transactions are processed and entered into the Reserve Bank's accounting system. Information on accessing ABMS information is available from any Reserve Bank.

Two balances, the *Daylight Overdraft (DLOD) balance* and the *account balance* are calculated in ABMS for all depository institutions. The *DLOD balance* reflects the balance in the institution's account according to the daylight overdraft posting rules, and is equivalent to the balance measured by DORPS. Under the posting rules implemented on October 14, 1993, the daylight overdraft account balances recorded in ABMS and measured through DORPS should be virtually identical. However, while DORPS takes an end-of-minute Asnapshot,@ ABMS continuously updates balances as transactions are processed. The *account balance* includes the amount in the *DLOD balance*, plus any debits and credits resulting from non-Fedwire transactions that have been processed by the Reserve Bank but are unavailable, according to the posting rules, as of the time of the ABMS inquiry.

In addition, a third balance shows funds available for institutions that have been placed in reject or intercept mode in ABMS. This balance is used in determining when funds transfers are rejected or intercepted as a result of insufficient funds in an institution's account. It includes the sum of an institution's net debit cap, the value of any collateral pledged, and any other amounts memo posted to the institution's account, plus either the *account balance* or the *DLOD balance*; Reserve Banks may choose to monitor institutions based on either the available *account balance* or the available *DLOD balance* depending on the circumstances.

D. The Daylight Overdraft Reporting and Pricing System (DORPS)

DORPS is a Federal Reserve computer system used by Reserve Banks to determine if an institution is in compliance with the Payments System Risk policy. It enables the Reserve Bank to identify all institutions with daylight overdrafts in excess of net debit caps or with uncollateralized book-entry overdrafts. DORPS is also used to calculate and assess charges for daylight overdrafts, as described in Section IV. In addition, DORPS maintains information on institutions' current reported capital in order to calculate daylight overdraft caps. These capital data normally originate in institutions' regulatory reports, such as bank call reports. DORPS also stores historical data on institutions' account balances, overdrafts, and overdraft charges.

DORPS calculates the Federal Reserve account balance of each institution on a minute-by-minute basis. Account balances are measured at the end of each minute (that is, at hh:mm:59) during the standard Fedwire operating day based on the institution's opening balance and all payment transactions posted to the institution's account up until that time.[3] In cases of unscheduled extensions of Fedwire hours, the final closing account balance is recorded as if it were the balance at the standard closing time, and balances between the scheduled and actual closing times are not recorded.

Debits or credits to an institution's account resulting from transfers of funds and securities over Fedwire, and non-Fedwire transactions processed by Reserve Banks, cause fluctuations in its account

[3] The daylight overdraft measurement period begins with the current official opening time of Fedwire at 8:30 a.m. Eastern time (ET) and continues until the official closing time at 6:30 p.m. ET. Effective December 8, 1997, the official opening time of the Fedwire funds transfer system will be 12:30 a.m. ET.

balance throughout the day. Although DORPS records positive as well as negative total end-of-minute balances in each institution's account, positive end-of-minute balances do not offset negative balances at other times during the day for purposes of determining compliance with net debit caps or for calculating daylight overdraft fees. However, where more than one account is maintained for an institution by Reserve Banks, the multiple accounts are consolidated for purposes of calculating the end-of-minute balance.

The Reserve Banks use DORPS to generate various reports, such as those shown below, at the end of each two-week reserve maintenance period. These reports show information relevant for monitoring institutions' daylight overdrafts, such as peak daily overdrafts for the period, overdrafts in excess of net debit cap, book-entry overdrafts, non-Fedwire account activity, end-of-minute account balances for a particular day, and related ratios, such as the peak daily overdraft relative to net debit cap. Reserve Banks generally provide DORPS reports to institutions in the process of counseling for daylight overdrafts in excess of their cap and for the assessment of daylight overdraft fees. These reports are available in electronic as well as paper form. Reserve Banks may also make these reports available to institutions to assist in their internal account monitoring and control. Institutions not incurring daylight overdrafts (or, in some cases, daylight overdraft fees) for a particular period generally will not receive daylight overdraft reports.

On the following pages, two standard DORPS reports are shown in sample format and their key elements described. In addition, an annotated version of the standard report that is provided to institutions that incur daylight overdraft fees can be found in Section IV.

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Intraday Position Report

The Intraday Position Report shows an institution's Federal Reserve account balance at one-minute intervals throughout the day. The upper portion of the report includes information about the institution, such as its name and ABA routing number, its cap and cap category, and its risk-based or other regulatory capital measure. If the institution has more than one Federal Reserve account, the words **A**consolidated entity@ will appear on the report and the figures shown will represent the aggregate balances across all accounts for the institution.

The main portion of the report, which may span several pages, shows end-of-minute account balances for a single day. The date of the balance data in the report is indicated above Column (1). The first column in the report shows the end-of-minute times associated with the balances displayed on a particular line between 8:30:59 a.m. and 6:30:59 p.m. All times shown are Eastern time. A vertical line (|) is used to indicate a span of minutes during which balances did not change and are therefore not displayed in order to conserve space on the report. Two asterisks (**) shown next to a particular interval indicate that this interval was excluded from daylight overdraft calculations used in monitoring compliance with the PSR policy and for calculating daylight overdraft fees. Such exclusions normally result from extended Reserve Bank computer down-time. The reason for any exclusions will be documented on the report.

Column (2), the **Fedwire balance**, shows the overall end-of-minute balance in the institution's account, and is the sum of Columns (5) and (6). The balance in the first row in Column (2) is calculated as the institution's opening balance (which is equal to the previous day's closing balance) plus any debits and credits that are posted at the opening of business according to the transaction posting rules. (Refer to Appendix D.) Any negative values in Column (2) are daylight overdrafts.

Columns (3)-(6) represent components of the overall account balance shown in Column (2). Note that negative values in these columns do not necessary imply that the institution incurred a daylight overdraft, as positive balances in one column may offset negative balances in another column. Column (3), the **Funds-only balance**, represents the balance in the account resulting from the institution's opening balance that day and cumulative debits and credits to the account from originations and receipts of Fedwire funds transfers. Column (4), **Non-wire activity balance**, is the institution's account balance resulting from debits and credits from non-Fedwire transactions, such as check and ACH, posted according to the transaction posting rules. Column (5), the **Adjusted-funds balance**, is the sum of Columns (3) and (4).

Column (6), the **Book-entry balance**, shows the balance in the account resulting from book-entry securities transfers and from debits and credits for redemptions, interest payments, and original issue purchases of Treasury and government agency securities. Columns (7) and (8) show the value of any fixed amount of collateral that the institution has pledged to cover book-entry securities-related and (in unusual circumstances) funds-related daylight overdrafts, respectively. The value of in-transit securities that have been pledged to secure book-entry securities-related overdrafts may not be included in Column (7), although an asterisk (*) would indicate that the institution has pledged in-transit securities as collateral.

Intraday Position Report (DORPS Reports 703 and 713)

RUN DATE: _____ FEDERAL RESERVE BANK PROGRAM: DOPQ703N
RUN TIME: _____ OF _____ PAGE: __
_____ OFFICE

INTRA-DAY POSITION
(PERIOD ENDING __-__-__)
08:30 TO 18:30
$ IN THOUSANDS

[NAME OF INSTITUTION] CAP RATING: _____
[ADDRESS OF INSTITUTION] AS OF: _____

CONTACT: _____ [TYPE OF] CAPITAL: _____
TITLE: _____ AS OF: _____

ABA: _____ SINGLE DAY CAP: _____
TWO WEEK CAP: _____
DATE: _____

TIME (1)	FEDWIRE BALANCE (2)	FUNDS ONLY BALANCE (3)	NON WIRE ACTIVITY BALANCE (4)	ADJUSTED FUNDS BALANCE (5)	BOOK ENTRY BALANCE (6)	BOOK ENTRY COLLATERAL (7)	FUNDS COLLATERAL (8)
08:30							
__:__							
	|						
__:__							
	|						

MAXIMUM OVERDRAFT FOR DATE:

_____	_____	_____	_____	_____

AVERAGE OVERDRAFT FOR DATE:

_____	_____	_____	_____	_____

'*' = IN-TRANSIT COLLATERAL HAS BEEN PLEDGED.

'|' = A SPAN OF DUPLICATE INTERVALS.

'**' = INTERVALS EXCLUDED FROM AVERAGE OVERDRAFT CALCULATION BECAUSE OVERDRAFTS RESULTED FROM FEDERAL RESERVE PROCESSING PROBLEMS OR OTHER EXCEPTIONAL CIRCUMSTANCES.

***** END OF REPORT *****

Below Columns (2) through (6), the maximum and average end-of-minute overdraft or negative balance amount for the day is displayed. If no negative balance was recorded for a particular column, a zero will be displayed. For daylight overdraft monitoring purposes, the maximum overdraft for the day under Column (2), if any, is compared against an institution's single-day cap to determine if a cap breach occurred. The average overdraft shown under Column (2) is the basis for calculation of daylight overdraft fees.

Daylight Overdraft Monitoring Summary Report

The Daylight Overdraft Monitoring Summary Report provides a summary of daylight overdraft activity in an institution's account over a two-week reserve maintenance period. The upper portion of the report includes information about the institution, such as its name and ABA number, and its cap and cap category. Most of the information presented in the body of this report can be derived from the Intraday Position Report for the two-week period (shown above). Unlike the Intraday Position Report, however, all overdraft amounts are shown as positive values in this report. The report shows only the maximum or peak overdraft for each day on which one or more end-of-minute total balances in the institution's account was negative.

The first column in the report shows the date on which an overdraft occurred. Column (2) shows the end-of-minute time associated with the peak total overdraft in the account, shown in column (3). All times shown are Eastern time. Column (3) represents the peak daylight overdraft for the day in the institution's total account balance (equal to the Fedwire balance, Column (2), in the Intraday Position Report). For most institutions, Column (4), **single-day adjusted capacity**, is equal to **single-day capacity**, shown in the upper portion of the report. For certain institutions, such as those in financially weakened condition, single-day adjusted capacity also includes collateral pledged for daylight overdraft purposes. Column (5) represents the excess, if any, of the peak overdraft above the institution's single-day adjusted capacity. Column (5) is equal to Column (3) minus Column (4).

Column (6), the **cap utilization ratio**, is calculated as the ratio of the institution's peak total overdraft, shown in Column (3), less any book-entry related overdrafts occurring at the same minute that were covered by collateral pledged for that purpose, divided by the single-day adjusted capacity. (This ratio is not relevant and cannot be calculated for institutions with single-day adjusted capacity of zero). Columns (7) and (8) show the peak overdrafts for the day resulting from funds and securities transfer activity, respectively. Note that these peak overdrafts may not have occurred at the same time as the peak total overdraft in Column (3). Thus Column (3) cannot be derived by adding together Columns (7) and Column (8). For the **peak funds-related overdraft** in Column (7), the negative adjusted funds balance (Column (3) in the Intraday Position Report) is offset by any credits in the account at the same time resulting from book-entry securities activity (that is, a positive balance in Column (6) of the Intraday Position Report). Column (8) shows the **peak book-entry securities-related overdraft** net of any simultaneous credits in the adjusted funds balance.

Near the bottom of the report, several two-week average statistics are shown in order to facilitate monitoring of overdrafts relative to an institution's two-week cap. The **two-week average overdraft** figure is calculated by adding any peak overdrafts shown in Column (3) and dividing by the number of business days in the reserve maintenance period, usually ten. The **excess over the two-week average cap** is the difference between the two-week average overdraft and the institution's two-week average cap. The **two-week cap utilization ratio** is calculated by dividing the two-week average overdraft by the two-week average cap.

Daylight Overdraft Monitoring Summary Report (DORPS Reports 701 and 731)

RUN DATE : _____ FEDERAL RESERVE BANK PROGRAM : DOPQ701N
RUN TIME : _____ OF _____ PAGE : 1
_____ OFFICE

DAYLIGHT OVERDRAFT MONITORING SUMMARY
TWO-WEEK PERIOD ENDING __-__-__
$ IN THOUSANDS

[NAME OF INSTITUTION]
[ADDRESS OF INSTITUTION]

CONTACT : _____
TITLE : _____

ABA : _____ CAP RATING : _____
AS OF : _____

CAPACITY
SINGLE DAY : _____
TWO WEEK : _____

DATE (1)	TIME (2)	TOTAL PEAK-OD (3)	SINGLE DAY ADJ. CAPACITY (4)	EXCESS OVER SINGLE DAY ADJ. CAPACITY (5)	CAP UTIL RATIO (6)	PEAK FUNDS + BE CR OVERDRAFT (7)	PEAK BE + FUNDS CR OVERDRAFT (8)
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

TWO WEEK AVERAGE OVERDRAFT AMOUNT : _____

EXCESS OVER 2 WEEK AVERAGE CAP : _____

TWO WEEK AVERAGE UTILIZATION RATIO : _____

'....' = AN AMOUNT LESS THAN $500.

'**' = CERTAIN INTERVALS WERE EXCLUDED FROM THE TOTAL PEAK OD CALCULATION BECAUSE THE OVERDRAFTS IN THESE INTERVALS RESULTED FROM FEDERAL RESERVE PROCESSING PROBLEMS OR OTHER EXCEPTIONAL CIRCUMSTANCES.

CAP UTILIZATION = AMOUNT OF TOTAL OVERDRAFT - COLLATERALIZED BE OD / AMOUNT OF ADJUSTED SINGLE DAY CAPACITY.

***** END OF REPORT *****

IV. Daylight Overdraft Fees

In 1989, the Federal Reserve first proposed that institutions be charged a fee for daylight overdrafts incurred in their Federal Reserve accounts. In September 1992, the Board of Governors of the Federal Reserve System approved the assessment of daylight overdraft fees, effective April 14, 1994. At that time, institutions will be charged fees for all daylight overdrafts incurred in their reserve and clearing accounts, subject to the deductible and waiver provisions discussed below. This section describes how the fees are to be calculated and assessed.

In addition, the Federal Reserve's daylight overdraft posting rules (provided in Appendix D), which include intraday posting times for non-Fedwire payments, are used to measure an institution's account balance for compliance with the PSR policy and for calculation of daylight overdraft charges as well. As a result, institutions that do not have direct access to the Fedwire system, but do use other Federal Reserve payment services, such as check or ACH, may be assessed daylight overdraft charges.

A. Calculation of Daylight Overdraft Charges

Daylight overdraft charges are calculated and assessed following each two-week reserve maintenance period. The rate charged for daylight overdrafts is quoted on the basis of a 360-day year and a 24-hour day. This annual rate was set initially at 24 basis points when pricing was implemented on April 14, 1994 and was increased to 36 basis points on April 13, 1995 for a minimum of two years. Beginning in 1997, the Board will evaluate the desirability of any further increases in the fee. Any changes to the fee resulting from that review will be announced with a reasonable lead-time for implementation.

The annual rate is converted to an effective rate by multiplying it by the fraction of the day that Fedwire is scheduled to be open, currently 10 hours out of 24, or 10/24. Thus the effective rate charged for overdrafts is currently 15 basis points (36 basis points x 10/24 hours). This rate will increase to 27 basis points when Fedwire operating hours are lengthened in December 1997; however, the average overdraft calculated for a longer Fedwire day will correspondingly decrease, for a given level of total overdrafts.

For each reserve maintenance period, the daylight overdraft charge is equal to the sum of the charges for each day of the period. The gross overdraft charge for a particular day is equal to the effective daily rate charged for overdrafts (the effective rate times 1/360) multiplied by the average overdraft for the day. The charge for each day is equal to the gross overdraft charge less the deductible, valued at the effective daily rate. This calculation is illustrated in the following equations and in the example shown in Figure IV-1.

$$\textit{Gross overdraft charge} = \textit{Effective daily rate} \times \textit{Average overdraft}$$

Daily charge = Gross overdraft charge - Value of the deductible.

The average overdraft for each day is calculated by adding together any negative end-of-minute balances incurred during the standard Fedwire day, and dividing this amount by the number of minutes in the standard Fedwire operating day.[4] All end-of-minute overdrafts incurred during the Fedwire day, including those not exceeding an institution's net debit cap and regardless of any collateral posted, are included in this calculation. Any positive end-of-minute account balances for a given day are effectively set to zero and do not offset any overdrafts incurred that day in computing the average daylight overdraft amount. The occasional extensions of Fedwire beyond the standard day do not affect the number of minutes used in computing the average overdraft, although the closing account balance will be affected, as described in Section III.

The gross overdraft charge for each day is reduced based on an institution's deductible. The deductible represents a threshold average level of overdrafts that an institution may incur without being charged a fee. This deductible is intended to provide liquidity to the payment system and to compensate for overdrafts caused by minor computer outages at Reserve Banks. As a result of the deductible, many institutions with daylight overdrafts in a particular two-week period do not actually incur fees.

The deductible is equal to 10 percent of an institution's qualifying capital for daylight overdraft purposes; this amount is valued at the daily rate charged for overdrafts described above.[5] However, unlike the effective daily rate used to calculate the gross overdraft charge, the portion of the day for which the daily rate is applied to the deductible is fixed at 10 out of 24 hours; this calculation will not change when Fedwire operating hours are increased to 18 hours.

B. Billing and Adjustments

Assessment of charges

At the end of each two-week reserve maintenance period, Reserve Banks send a report of preliminary daylight overdraft charges to each institution that incurred charges in that period, as discussed below. Final charges are calculated and an assessment to the institution's Federal Reserve account will be made at the end of the reserve maintenance period following the reserve maintenance period in which charges were assessed. All two-week charges of $25 or less for any institution will be waived. Note that earnings credits from the holding of clearing balances cannot be used to offset overdraft charges.

[4] When Fedwire hours are lengthened in December 1997, the number of minutes will increase from the current 601 to 1,081.

[5] For branches and agencies of foreign banks, the 10 percent deductible rate is applied to the institution's U.S. capital equivalency, as described in Section V.

```
Policy parameters:

      ! Official Fedwire day = 18 hours
      ! Deductible percentage of capital = 10%
      ! Rate charged for overdrafts = 36 basis points (annual rate)

Institution's parameters:

      ! Risk-based capital = $50 million
      ! Sum of end-of-minute overdrafts for one day = $4 billion

Daily Charge calculation:

       Effective daily rate = .0036 x (18/24) x (1/360) = .0000075
       Average overdraft = $4,000,000,000 / 1081 minutes = $3,700,278
       Gross overdraft charge = $3,700,278 x .0000075 = $27.75
       Value of the deductible = .10 x $50,000,000 x .0000042 = $21.00
       Overdraft charge =  27.75 - 21.00 = $6.75.

Identical daily overdraft activity for each day of the reserve maintenance
period (generally 10 business days) would result in a two-week overdraft
charge of $67.50.
```

Adjustments to calculated daylight overdraft charges may be appropriate in certain limited circumstances, such as in cases of extended computer or communications down-time at a Reserve Bank, or to recognize errors or incorrect accounting entries. However, no adjustments will be made to compensate for computer problems at depository institutions. An adjustment for a particular day will be made if requested by an institution if the adjustment would reduce the fee charged to the institution.

Daylight overdraft charge reports

Institutions that incur overdrafts that are sufficiently large to result in daylight overdraft fees will receive a preliminary Advice of Daylight Overdraft Charges Report at the close of the reserve maintenance period in which the overdrafts occurred. This report shows the average overdraft for each day on which fees were incurred, if any. Column (1) shows the date on which an overdraft occurred that was larger, on an average basis, than the institution's deductible amount. Column (2) shows the average overdraft for the day on a per-minute basis. Column (3) shows the gross overdraft charge amount, which is equal to the average overdraft in Column (2) multiplied by the effective daily rate charged on daylight overdrafts as described in Section IV of this manual. Column (4) is equal to the gross overdraft charge amount

Daylight Overdraft Charge Reports (DORPS Reports 700, 426, 462 and 464)

```
RUN DATE : ______                    FEDERAL RESERVE BANK                          PROGRAM : DOPQ462N
RUN TIME : ______                       OF __________                                  PAGE :  1
                                    __________ OFFICE

                              STATEMENT OF DAYLIGHT OVERDRAFT CHARGES
                                  TWO-WEEK PERIOD ENDING __-__-__

       [NAME OF INSTITUTION]
       [ADDRESS OF INSTITUTION]

       CONTACT : __________
         TITLE : __________

ABA : ____________                                         CAPITAL :      __________
                                                             AS OF :      __________
                                                   VALUE OF DEDUCTIBLE :     __________

                     AVERAGE DAYLIGHT OVERDRAFT   GROSS OVERDRAFT          DAYLIGHT OVERDRAFT
      DATE                (IN THOUSANDS)           CHARGE AMOUNT         CHARGE
      (1)                      (2)                      (3)                 (4)

    __-__-__              ______________          __________           __________

TOTAL CHARGE: ____________

       '....' = AN AMOUNT LESS THAN $500.

       '**' = CERTAIN TIME INTERVALS WERE EXCLUDED FROM THE AVERAGE OVERDRAFT CALCULATION BECAUSE
       OVERDRAFTS IN THESE INTERVALS RESULTED FROM FEDERAL RESERVE PROCESSING PROBLEMS OF OTHER
       EXCEPTIONAL CIRCUMSTANCES.

       THE ABOVE AMOUNT WILL BE CHARGE TO YOUR ACCOUNT ON __-__-__. CALCULATIONS ARE SHOWN BELOW:

              VALUE OF THE DEDUCTIBLE = CAPITAL * .1 * ANNUAL CHARGE RATE OF .0024 * 1/360 * 10/24.
              GROSS OVERDRAFT AMOUNT = AVG DAYLIGHT OD * ANNUAL CHARGE RATE OF .0024 * 1/360 * 10/24.
              DAYLIGHT OVERDRAFT CHARGE = GROSS OVERDRAFT AMOUNT - VALUE OF THE DEDUCTIBLE.

                                   *****  END OF REPORT  *****
```

in Column (3) less the institution's deductible, which is generally equal to 10 percent of its risk-based capital. The amount of the deductible is shown above Column (4). At the bottom of the report, the date at which the fees will be charged to the institution's account is indicated. If the total charges are $25 or less for a two-week period, however, the charges will be waived, as indicated on the report.

A Statement of Daylight Overdraft Charges Report, which is similar in format to the Advice of Daylight Overdraft Charges, will be produced at the close of the following reserve maintenance period, at which time fees will be assessed to the institution's account. If these charges are adjusted subsequently, a revised statement of charges will be sent to the institution. This report will include the amount of the adjustment and the reason for the adjustment. In this circumstance, the original charges that were assessed to the institution's account will be reversed, and the new charges will then be debited to the account. Similar reports are also generated for institutions that are subject to the daylight overdraft penalty fee, as discussed in Section V of this manual.

V. Special Situations

A. Branches and Agencies of Foreign Banks

In general, U.S. branches and agencies of foreign banks are treated in the same manner as domestic institutions under the Federal Reserve's PSR policy. However, there are several unique considerations affecting the way in which the policy is applied to U.S. branches and agencies of foreign banks, as discussed below and in the self-assessment procedures in Section VI of this manual.

In general, net debit caps for foreign banks are calculated in the same manner as for domestic banks, that is, by applying cap multiples for one of the six cap categories to a capital measure. However, the determination of an appropriate capital measure, known as the U.S. capital equivalency, is substantially different for foreign banks, and depends on whether the bank is based in a country that has signed or adopted the standards of the Basle Capital Accord. In addition, special provisions regarding collateralization of overdrafts, allocation of caps, and capital reporting requirements, also apply to foreign banks.

U.S. capital equivalency

A foreign bank whose home-country supervisor adheres to the Basle Capital Accord (or requires capital at least as great and in the same form as called for by the Accord) may calculate its net debit cap by applying the cap multiples for its cap category to a U.S. capital equivalency measure equal to the greater of (1) 10 percent of worldwide capital, or (2) 5 percent of the total liabilities of each agency or branch, including acceptances, but excluding accrued expenses and amounts due and other liabilities to offices, branches, and subsidiaries of the foreign bank.[6]

A foreign bank that wishes to have its worldwide capital figure used in the calculation of its net debit cap is required to report its worldwide capital to its Administrative Reserve Bank (ARB) annually within 90 days of the end of the bank's fiscal year.[7] Foreign banks have the option of reporting equity or, if available, total qualifying capital (Tier I plus Tier II) as described in the Basle Capital Accord. A list of countries whose supervisory agencies adhere to the Basle Capital Accord is included in Appendix C.

[6] These items are reported on the foreign bank family's quarterly Report of Assets and Liabilities of U.S. Branches and Agencies of Foreign Banks (Federal Financial Institution Examination Council report: FFIEC-002).

[7] This worldwide capital information must be reported on Form FR 2225. A copy of Form FR 2225, along with detailed instructions, may be obtained from any Reserve Bank.

For banks whose home-country supervisor does not adhere to the Basle Capital Accord, the net debit cap (if other than Zero) is calculated by applying cap multiples to U.S. capital equivalency, measured as the greater of (1) the sum of 5 percent of the total liabilities of each agency or branch, as described above, or (2) the sum of the amount of capital (but not surplus) that would be required of a national bank being organized at each agency or branch location. The latter measure of U.S. capital equivalency is not normally reported to the Federal Reserve. If a foreign bank desires to use this measure as its capital equivalency, the ARB should be notified to make special arrangements.

As in the case of U.S. institutions, the ARB must have the ability to assess regularly the financial condition of a foreign bank in order to grant the institution a daylight overdraft cap other than Zero. The ARB will generally require information regarding Tier I and Total risk-based capital ratios for the consolidated foreign bank. Accordingly, U.S. branches and agencies of foreign banks seeking a positive daylight overdraft cap (exempt, *De minimis*, or self-assessment cap categories) should provide the ARB with capital ratios at the time the cap is established and annually thereafter. U.S. branches and agencies of foreign banks that are based in countries that do not adhere to the Basle Capital Accord should provide information comparable to the Basle Capital Accord format. Workpapers for capital ratios should be maintained at a designated U.S. branch or agency and are subject to review by the institution's primary supervisor. The Federal Reserve considers capital information provided to the ARB in connection with an institution's daylight overdraft cap to be confidential.

Collateralized overdrafts

Foreign banks may incur overdrafts up to an amount equal to their cap multiple times 10 percent of worldwide capital, provided that any overdrafts above the net debit cap are fully collateralized. For instance, if a foreign bank uses one of the alternative measures of U.S. capital equivalency, its net debit cap may be less than its cap multiple times 10 percent of its worldwide capital. If this is the case, the bank may incur overdrafts up to its cap multiple times 10 percent of its worldwide capital by pledging collateral to cover the additional overdrafts. Like U.S. banks, foreign banks may incur book-entry securities related overdrafts above their cap provided those overdrafts are collateralized.

Allocation of caps

The Federal Reserve monitors the daylight overdrafts of U.S. branches and agencies of foreign banks on a consolidated basis; that is, each foreign bank family, consisting of all of the U.S. branches and agencies of a particular foreign bank, has a single daylight overdraft cap. Like other institutions with accounts in more than one Federal Reserve District, intraday account balances of all the U.S. branches and agencies in a foreign bank family are added together for purposes of monitoring against its daylight overdraft cap, as described in Section III.

For real-time monitoring purposes, however, a foreign bank that has offices in more than one District may choose to allocate a portion of its net debit cap to branches or agencies in Districts other than that of the ARB. Unless a foreign bank family instructs otherwise, the Federal Reserve will assign the dollar value of the family's single-day daylight overdraft cap to the branch or agency located in the Federal Reserve District of the ARB. Using a format similar to the sample letter in Appendix B, the foreign bank

family may indicate to the ARB the dollar amount of cap to be allocated to offices in other Districts. Any dollar amount of the cap that is not allocated to offices in other Districts will be assigned to the branch or agency in the District of the ARB. A foreign bank may revise its cap allocation from time to time by communicating the revision to its ARB. It is expected that such revisions would be infrequent.

B. Nonbank Banks and Industrial Banks

The Competitive Equality Banking Act of 1987 (CEBA), as implemented in Section 225.52 of Federal Reserve Regulation Y, prohibits a nonbank bank or industrial bank Agrandfathered@ under the Act from incurring any overdrafts in its account at a Federal Reserve Bank on behalf of an affiliate or permitting an affiliate to incur an overdraft in an account at the nonbank bank. For this purpose, an affiliate is any company that controls the nonbank bank or industrial bank, is controlled by it, or is under common control with it. A nonbank bank or industrial bank loses its grandfathered status under CEBA if it permits or incurs overdrafts prohibited by CEBA. In addition, nonbank banks and industrial banks must comply with the PSR policy regarding net debit caps in the same manner as other depository institutions; these institutions are also subject to daylight overdraft fees, calculated using the same methodology as that applied to other depository institutions.

The prohibition does not extend to overdrafts that are the result of inadvertent computer or accounting errors beyond the control of both the nonbank bank or industrial bank and its affiliate. In addition, nonbank banks are permitted to incur overdrafts on behalf of affiliates that are primary dealers in U.S. government securities, provided such overdrafts are fully collateralized.

If a nonbank bank or industrial bank incurs overdrafts, measured as described above, the Reserve Bank will request that the institution provide detailed information about activity processed for affiliate accounts, so that it can determine whether the overdraft was incurred on behalf of an affiliate. If the overdraft was on behalf of a primary dealer affiliate, the nonbank bank is required to demonstrate that the overdraft was fully collateralized. Nonbank banks and industrial banks that do not maintain accounts for affiliates may file a letter with the Reserve Bank on an annual basis certifying that they do not currently have affiliate accounts and will notify the Reserve Bank promptly should that status change. (A sample certification letter is provided in Appendix B.)

C. Institutions Subject to Daylight Overdraft Penalty Fees

Under the PSR policy, institutions that have Federal Reserve accounts but are not eligible to have access to the discount window are not eligible for a positive daylight overdraft cap. These institutions are strongly discouraged from incurring any daylight overdrafts. If such an institution were to incur an overdraft, however, the Reserve Bank would generally require it to pledge collateral sufficient to cover the peak amount of the overdraft for an appropriate period.

The institutions enumerated below are subject to a penalty fee on any daylight overdrafts incurred in their Federal Reserve accounts. The penalty fee is intended to provide a strong incentive for these institutions to avoid incurring any daylight overdrafts in their Federal Reserve accounts. The penalty fee

is assessed at a rate equal to the regular daylight overdraft fee plus 100 basis points (annualized, 24-hour rate). The penalty fee is calculated and assessed in the same manner as the daylight overdraft fee charged other institutions, as described in Section IV, with the following exceptions: no deductible is used in the calculation, there is no fee waiver provision, and the minimum penalty fee assessed in any two-week reserve maintenance period is $25.

Edge Act and agreement corporations[8]

Edge Act and agreement corporations do not have regular access to the discount window and should refrain from incurring daylight overdrafts in their reserve or clearing accounts. In the event that any daylight overdrafts occur, the Edge Act or agreement corporation will be required to pledge collateral to cover the overdrafts. Like foreign banks, Edge Act and agreement corporations that have branches in more than one Federal Reserve District are monitored on a consolidated basis.

Bankers' banks[9]

Bankers' banks, including corporate credit unions, are exempt from reserve requirements and do not have regular access to the discount window. Bankers' banks may voluntarily waive their exemption from reserve requirements, thus gaining access to the discount window. Such bankers' banks would be free to establish caps and would be subject to the PSR policies in the same manner as depository institutions. Those bankers' banks that have not waived their exemption from reserve requirements should refrain from incurring overdrafts and must pledge collateral to cover any daylight overdrafts they do incur.

[8] These institutions are organized under Section 25A of the Federal Reserve Act (12 U.S.C. 611-631) or have an agreement or undertaking with the Board of Governors under Section 25 of the Federal Reserve Act (12 U.S.C. 601-604a).

[9] For the purposes of this policy, a bankers' bank is a financial institution that is not required to maintain reserves under the Federal Reserve's Regulation D (12 C.F.R. Part 204) because it is organized solely to do business with other financial institutions, is owned primarily by the financial institutions with which it does business, and does not do business with the general public and is not a depository institution as defined in the Federal Reserve's Regulation A (12 C.F.R. ' 201.2(a)).

Limited-purpose trust companies[10]

The Board of Governors is permitted to grant Federal Reserve membership to limited-purpose trust companies subject to conditions the Board may prescribe. Limited-purpose trust companies that maintain Federal Reserve accounts should refrain from incurring overdrafts and must pledge collateral to cover any daylight overdrafts that they incur.

D. Inter-Affiliate Transfer Arrangements

The PSR policy permits the transfer of funds over Fedwire among affiliated institutions for the purpose of simulating consolidation of net debit caps within holding companies. Affiliated institutions send funds transfers in amounts up to their net debit caps to a lead institution at the opening of business each day and the lead affiliate returns the funds at the end of the day. Such transfers may not exceed the sending institution's net debit cap.

Under the policy, the main requirements for entering into such arrangements are the following:

- Each year, the sending institution's board of directors must specifically approve the extension of credit to specified affiliates and must send a copy of the inter-affiliate resolution to its Reserve Bank (model resolutions are provided in Appendix B); and

- The institution's primary supervisor determines during the regular examination process that (1) the directors' resolution has been passed in the last 12 months; (2) limits have been established on the extension of credit to each affiliate; (3) controls have been established to ensure adherence to the limits; and (4) the limits are determined to be effective.

It should be noted that parent companies of Edge Act or agreement corporation subsidiaries are permitted to fund their subsidiaries without submitting inter-affiliate transfer agreements. These institutions are considered subsidiaries of the bank rather than direct subsidiaries of a holding company.

[10] For the purposes of this policy, a limited-purpose trust company is a trust company that, because of limitations on its activities, does not meet the definition of Adepository institution@ in Section 19(b)(1)(A) of the Federal Reserve Act (12 U.S.C. 461(b)(1)(A)).

E. Third-Party Access Arrangements

Under certain conditions, the Federal Reserve permits arrangements whereby an account-holding depository institution (referred to as the Aparticipant@) may enter into an arrangement with a third-party (the Aservice provider@) to initiate Fedwire transfers from the account of the participant. In most third-party access arrangements, the service provider initiates Fedwire payments that are posted to the participant=s Federal Reserve account. The participant remains responsible for its account, the associated reserve maintenance, and establishment of and compliance with its net debit cap.

Of primary importance in third-party access arrangements is assurance that the participant retains ultimate control over the decision-making process. That is, it must not allow the service provider to have unlimited and unsupervised access to its Federal Reserve account. As a result, the Federal Reserve permits such arrangements under carefully controlled conditions. A detailed list of these conditions may be obtained from the Reserve Bank. First and foremost, the participant must retain operational control of the credit-granting process by either individually authorizing each Fedwire transfer or by establishing transfer limits for individual customers and its own activity within which the service provider can act (so-called Aline-of-credit arrangements@). In either case, the participant and service provider(s) must execute an agreement with the relevant Reserve Bank(s) that incorporates the conditions of the Fedwire third-party access policy. As of February 1, 1996, the Fedwire third-party access policy was modified to allow a participant to establish an arrangement with a foreign service-provider. Additional conditions are imposed upon these types of arrangements.

Each serviced institution must monitor its own Federal Reserve account position, either by having an on-line terminal connection with its service provider or through a prompt review of accounting information from its Reserve Bank. Either the service provider or the participant must have the operational ability to ensure that the aggregate Fedwire activity of the participant does not result in a level of overdrafts that exceeds the latter's daylight overdraft cap. However, in cases in which the service provider is authorized to process payments within credit limits, this control must be at the service provider.

In conducting a self-assessment, the participant must take into consideration its degree of control and reliance on the service provider in terms of operational controls and monitoring positions.[11] Regardless of the servicing arrangement, the timeliness and quality of information available to the management of the participant should be reflected in its self-assessment. Customer monitoring standards should be applied to the operation where customer information is controlled and credit limits enforced. If a service provider is authorized to process payments within credit limits established by the participant, the self-assessment standards for operational controls should generally be applied to the operation of the service provider. In cases in which the service provider operates under credit limits but relies on customer accounting information maintained by the participant, customer monitoring standards addressing the quality of the information must be applied at the participant while controls limiting payments would be enforced at the service provider.

[11] See Section VI for self-assessment procedures.

The participant is responsible for maintaining adequate contingency backup capabilities. The ability to shift payment operations to a backup facility should periodically be tested. In addition, a participant that contracts with an unaffiliated or foreign service provider must be able to continue its Fedwire operations in the event the arrangement is terminated. To do this, the participant must either: (1) retain the capability to perform functions internally that had been delegated to the service provider, or (2) make arrangements with an alternate service provider to take over these functions.

VI. Self-Assessment Procedures

This section provides information and guidelines for depository institutions choosing to perform a self-assessment to establish a daylight overdraft net debit cap in the Average, Above average, or High categories. If an institution elects to establish a net debit cap through a self-assessment, the following four components must be analyzed and evaluated:

- **$** Creditworthiness;
- **$** Intraday funds management and control;
- **$** Customer credit policies and controls; and
- **$** Operating controls and contingency procedures

The institution must assign a rating based on its assessment to each of the above components and then combine the ratings to determine the appropriate net debit cap category. Part E of this section provides a matrix that must be used to combine the four components into a single rating. Appendix A contains worksheets that should be used as a base in conducting an assessment. A Reserve Bank reserves the right to evaluate independently the four factors of an institution's self-assessment and may arrive at an overall rating that is lower than that determined by the institution. In such cases, the Reserve Bank's evaluation will determine the institution's cap category. In addition, Section II of this manual provides information on filing a resolution to establish the cap once the self-assessment has been completed, and Appendix B provides sample resolutions.

A. Creditworthiness Component

For most institutions, the appropriate net debit cap category is principally determined by the institution's capital adequacy and most recent supervisory rating, which taken together form the basis of the creditworthiness component rating. In the self-assessment, an institution's creditworthiness is assigned one of the following ratings: *Excellent*, *Very Good*, *Adequate*, or *Below Standard*. An *Excellent* or a *Very Good* rating indicates that an institution has demonstrated a sustained level of financial performance above its peer group norm. As a general matter, fundamentally sound depository institutions that are experiencing only modest weakness will receive a rating of *Adequate*. The financial performance of such institutions is usually at or just slightly below the peer norm.

If an institution's creditworthiness rating is *Adequate* or higher, it may then proceed to rate the other three components in the self-assessment process, subject to the provisions regarding affiliated entities, discussed below. The institution's assessment of the other three key components will determine whether its composite rating will be lower than or equal to that determined by the creditworthiness component. The rating should be recorded in the assessment worksheet found in Appendix A.

Matrix approach to assessing creditworthiness

In most instances, an institution will use the Creditworthiness Matrix (Table VI-1) to determine its creditworthiness rating. This matrix translates an institution's level of capital and supervisory rating into a creditworthiness assessment. This methodology is designed to simplify the process of assessing creditworthiness.

Table VI-1
Creditworthiness Matrix

Capital Level[12]	**Supervisory Composite Rating**[13]		
	Strong	Satisfactory	Fair
Well Capitalized	Excellent	Very Good	Adequate
Adequately Capitalized	Very Good	Very Good	Adequate
Undercapitalized	**	**	Below Standard

*** Institutions that fall in this category should perform a full self-assessment of creditworthiness. See Appendix A.*

Under the matrix approach, an institution whose capital level falls within the category of Well Capitalized or Adequately Capitalized and whose supervisory composite rating is Strong, Satisfactory, or Fair, will generally qualify for a positive net debit cap category. An institution that has received a supervisory rating of Marginal or Unsatisfactory, or has capital levels within the Significantly or Critically Undercapitalized zones, would receive a *Below Standard* rating for creditworthiness and would not qualify for a net debit cap category other than Zero. A *Below*

[12] Refer to the Federal Deposit Insurance Corporation Improvement Act of 1992 and applicable supervisory risk-based capital guidelines for thresholds and definitions of capital levels.

[13] Supervisory composite ratings, such as the Uniform Bank Rating System (CAMELS), are generally assigned on a scale from 1 to 5, with 1 being the strongest rating. Thus, for the purposes of the Creditworthiness Matrix, a supervisory rating of 1 is considered Strong; a rating of 2 is considered Satisfactory; a rating of 3 is considered Fair; and so on.

Standard rating would also be assigned if an institution received a supervisory rating of Fair and its capital measures fell within the Undercapitalized zones. In these situations, the primary supervisor will have communicated to the institution's directors and management its concerns with respect to capital, asset quality, or other less than satisfactory conditions. Supervisory actions will also have been initiated requiring prompt corrective action in order to prevent further impairment of the institution's viability.

Full assessment of creditworthiness

In certain limited circumstances an institution may conduct a full self-assessment of the creditworthiness component. These circumstances might include a significant change in financial condition, the availability of additional substantive information about financial condition not available at the time of the last examination, or a significant improvement in areas of concern to the primary supervisor since the last examination. Procedures for completing a full self-assessment of creditworthiness are contained in Appendix A, along with the worksheets that may be used for this process.

In its self-assessment submission, an institution performing a full self-assessment of creditworthiness must cite the critical factors that would support a proposed creditworthiness rating differing from that indicated by the matrix approach. For example, such factors might include the establishment of a firm plan to achieve a level of capital commensurate with a designation of Adequately Capitalized, which has been approved by the institution's primary supervisor and Reserve Bank. Significant enhancements in the institution's available liquidity or reductions in its problem assets could also be used to support a higher rating in the context of a full self-assessment of creditworthiness. However, the reasons for greater emphasis on other factors should be well-documented in the submission by the institution's management. Regardless of the results of the full assessment of creditworthiness, the creditworthiness rating achieved is not necessarily related to or reflective of the rating that would result from a regulatory examination.

Affiliated institutions

The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 allows the FDIC to hold an insured depository institution liable for any losses incurred from the failure of a commonly controlled institution. Thus, an institution could become capital insolvent should the deposit insurer elect to assess the institution the costs incurred from a failed commonly controlled institution. For depository institutions that are affiliates of a multi-bank holding company, the creditworthiness rating would be affected if the condition of one or more of the commonly controlled institutions is deemed Marginal or Unsatisfactory by the primary supervisor and one or more of these institutions represents a material portion of the organization's consolidated assets or materially affects the organization's consolidated operations. This situation may arise when a supervisory agency discloses material operating or financial weakness within the parent company, or affiliated institutions, that pose significant risk to a depository institution. When such situations arise, the depository institution should adopt a Zero net debit cap.

If the parent company and related affiliates are in satisfactory condition, no further adjustment needs to be made to the results of the institution's self-assessment. Such findings will normally be supported by evidence that the holding company serves as a source of strength to the depository institution; that is, it is willing and able to provide capital contributions or other managerial and financial support to the institution. If the management performing the assessment does not have the information needed for assessing the condition of affiliated institutions, it should confer with the financial officers of the holding company.

U.S. branches and agencies of foreign banks

Section V contains additional information on compliance with the PSR policy as it applies to U.S. branches and agencies of foreign banks. U.S. branches and agencies of foreign banks should perform their self-assessment on a consolidated basis rather than through an office-by-office review. A senior group that has the knowledge of and responsibility for the consolidated entity should be responsible for complying with the requirements of the PSR program. Under no circumstances may individuals who are responsible only for U.S. operations complete the self-assessment and cap resolution. However, management of U.S. operations may prepare the self-assessment for approval by the parent organization, with the exception of the creditworthiness component, which must be prepared by the head office.

The Federal Reserve recognizes that directors of foreign banks do not necessarily serve in the same capacity as directors of banks in the United States. In these instances, individuals who are responsible for formulating policy at the foreign bank's head office may substitute for directors. When such a substitution is made, the nature and level of responsibility of those performing the self-assessment, determining the appropriate net debit cap category, and approving the cap resolution should be clearly documented and maintained in a file at a designated U.S. office along with other specifics of the review.

While the creditworthiness of the foreign bank is reflective of the entire organization, for purposes of the Federal Reserve's PSR program, the overall condition of its U.S. operations must also be considered. Accordingly, the supervisory rating used in the Creditworthiness Matrix should reflect the Federal Reserve's composite examination rating. In situations in which a foreign bank operates multiple branches and agencies in the United States, the supervisory ratings applicable to the individual offices should be combined using a weighted average of total assets to scale the relative importance of the individual branch ratings. Capital, the other factor in the Creditworthiness Matrix, should reflect the capital level of the parent bank.[14] However, the rating obtained from the Creditworthiness Matrix for the U.S. branches and agencies is always conditioned on the overall creditworthiness of the entire organization. In addition, if the ARB is unable to obtain adequate

[14] For U.S. branches and agencies of foreign banks that are based in countries that adhere to the Basle Capital Accord, Tier I and Total risk-based capital ratios calculated according to home-country rules should be compared to the Prompt Corrective Action capital categories, and the resulting capital category should be used in the Creditworthiness Matrix. These institutions do not have to compare Tier I capital to total average assets (the leverage ratio) to the Prompt Corrective Action capital categories in order to assess creditworthiness.

information regarding the creditworthiness of the institution, the ARB may determine that a positive daylight overdraft cap is not appropriate.

For those foreign banks whose home country supervisor does not adhere to the Basle Capital Accord and for those foreign banks that have not reported worldwide capital to the Reserve Bank, the Creditworthiness Matrix does not apply, and the full self-assessment procedures for creditworthiness should be completed. In addition, the creditworthiness rating is conditioned on the composite examination rating of the U.S. operations of the branch or agency.

Supervisory examination and rating information

Examination reports and any correspondence from supervisory agencies regarding the institution's condition, including the composite supervisory rating and any of its components, are considered confidential information. Consequently, an institution's management must ensure that supervisory information is provided only to appropriate individuals within the depository institution, supervisory agencies, and Reserve Banks.

B. Intraday Funds Management and Control

The purpose of the analysis of intraday funds management and control is to assess a depository institution's ability to fund its settlement obligations on a daily basis across all payment systems in which it participates. The analysis will require the involvement of funds management, credit, and operations personnel and a review of payments activity over a period of time. A Payment Flows Worksheet is provided in Appendix A (Table A-3) to assist depository institutions in analyzing intraday payment activity.

In order to obtain an accurate understanding of funds movements, it is important that an institution has a good understanding of its daily use of intraday credit as well as its use of intraday credit on average over two-week periods. The analysis should cover a sufficient period of time so that an institution can determine its peak demand for intraday credit and can also establish its average use of such credit. The more volatile an institution's payments activity, the longer the interval that should be selected for analysis. The analysis will need to incorporate all operational areas with access to payments systems. In addition to large-dollar funds and book-entry securities transfer activity, the review should address check clearing, ACH, currency operations, and other payment activity that results in relatively large-value settlement obligations. Thus, the analysis should not be limited to on-line payment systems, nor should it be limited to payment systems to which the institution has on-line access. Additionally, institutions with direct access to Fedwire or other payment systems in more than one Federal Reserve District must combine all of these access points into a single integrated analysis.

In performing the analysis, the institution should consider both liquidity demands and the potential credit risks associated with participation in each payment system. The institution's capacity to settle its obligations in both routine and non-routine circumstances should be carefully assessed. Thus, a complete assessment of an institution's ability to control its intraday obligations extends, in

many cases, beyond its ability to control its use of Federal Reserve intraday credit within the constraints of its net debit cap. Rather, it extends to the institution's ability to control its position across all payment systems to a level that permits it to fund its obligations on a regular basis. This type of assurance requires an institution to understand fully the nature of its obligations and to establish systems that permit it to monitor daily activity and to respond to unusual circumstances.

Liquidity requirements

An institution's daylight overdraft net debit cap represents the upper limit on the amount of intraday Federal Reserve credit that the institution may use. This limit applies to large-dollar funds and book-entry securities transactions as well as to all other payment transactions that are settled through the institution's Federal Reserve account, including check, ACH, currency and coin, net settlement activity, and other transactions. An institution participating on one or more large-dollar clearing and settlement systems must manage its position on each system, comply with net debit caps on each system, and assure itself that it has the capacity to satisfy all of its settlement obligations each business day. The large-dollar systems most frequently used by depository institutions include the Clearing House Interbank Payments System (CHIPS), Participants Trust Company (PTC), and Depository Trust Company (DTC).

To assess its average daily liquidity requirements, an institution participating on multiple systems should determine the magnitude and relative importance of the various payments flowing through its Federal Reserve account as well as the payments flowing over each privately operated clearing and settlement system. For each payment service used, liquidity sources should be assessed to determine whether sufficient funding is regularly obtainable to satisfy obligations. In making this assessment, an institution should consider the creditworthiness of its counterparties as well as its customers. In addition, it should consider potential liquidity demands associated with the default of another participant in a privately operated clearing and settlement arrangement, such as CHIPS, PTC, DTC, a local check clearinghouse, a privately operated ACH system, an automated teller machine or point-of-sale network, or a credit card settlement arrangement. The institution's capability to obtain the necessary funding before the end of a business day in the event that a major counterparty, correspondent, customer, or member of a privately operated clearing and settlement system were to default on its net settlement obligations is particularly important in this assessment.

For example, if a customer that is an active user of payment services and also a significant user of intraday credit were unable to cover its settlement obligations, a depository institution would need to be able to fund those obligations by the close of business on the given settlement day. Similarly, if a participant in a local check clearing arrangement were to default on its settlement obligation, it is likely the settlement for that arrangement would be recast and each of the other participants in the arrangement would experience a change in its net settlement obligation. In each of these cases, management should assure itself that it has the capability to obtain the necessary funding late in the day to cover such unexpected occurrences.

Monitoring and control capabilities

Once the payment environment has been defined, the institution should evaluate its account monitoring capability. Organizations have branches that operate in more than one Federal Reserve District and have more than one Federal Reserve account, such as certain Edge Act or agreement corporations and U.S. agencies and branches of foreign banks, should determine for their internal use how the institution's net debit cap will be allocated across its accounts, and each office maintaining a Federal Reserve account should be responsible for monitoring its account within the constraint of its cap allocation.

At the same time, one office should be assigned the responsibility to oversee consolidated payment activity, and the self-assessment should reflect the monitoring capability of the consolidated entity. The designated office will be expected to be knowledgeable of the payment activity at all offices and be able to respond to questions received from the Federal Reserve or the institution's primary supervisor.

Monitoring capabilities may be classified as real-time or periodic. A real-time monitoring system accounts for each large-dollar funds and book-entry securities transfer as it is sent or received and recognizes off-line activity, such as check, ACH, and net settlement entries, as data become available or in a manner that reflects the Federal Reserve's posting rules for payments settled through Federal Reserve accounts. Institutions participating on multiple large-dollar systems may use several monitoring systems to track activity. A periodic monitoring system provides balance information reflecting Fedwire funds and book-entry securities transfer activity or other large-dollar transactions, such as CHIPS messages, plus off-line transactions at specific intervals, such as every 15 minutes, 30 minutes, or hour.

C. Customer Credit Policies and Controls

The assessment of an institution's customer credit policies and controls requires two distinct analyses:

- An analysis of the institution's policies and procedures for assessing the creditworthiness of its customers, its counterparties, and its correspondents; and

- An analysis of the institution's ability to monitor the positions of individual customers and to control the amount of intraday and interday credit extended to each customer.

The analyses require the involvement of both credit and operations personnel and should focus on the creditworthiness of all customers, including corporate and other depository institutions, that are active users of payment services. In addition, the creditworthiness of correspondents and all counterparties on privately operated clearing and settlement systems should be assessed.

For institutions that have arranged with a third-party service provider to process payments, it is recognized that certain operational controls may be established in either the funds and book-entry securities transfer operation of the service provider or the depository institution's own operation, depending on the nature of the arrangement. In any case, the standards for customer credit control and monitoring are to be applied uniformly and extended to the service provider's operation as appropriate. For further details, refer to the discussion of third-party service arrangements in Section V of this manual.

General credit policies

The assessment of credit policies is one of the most important components of the self-assessment because credit policies are essential in controlling the risks faced by the institution. The purpose of this analysis is to evaluate how effectively a depository institution controls the credit risk to which it is exposed in extending interday and intraday credit in connection with the provision of payment services to customers that maintain accounts with the institution. The section also addresses the credit risk faced by the institution from correspondents and counterparties on privately operated clearing and settlement arrangements. There are several elements to the analysis. First, the institution's formal credit policies should be assessed. Second, customers that are active users of payment services should be identified, as well as the institution's correspondents and counterparties on privately operated clearing and settlement systems. Third, the approach used to assess the creditworthiness of customers and correspondents as well as the method used to establish credit limits for counterparties on privately operated clearing and settlement systems should be reviewed.

Sound credit policies should address all credit relationships the institution has with a customer, both explicit lending and intraday lending as a result of providing payment services. Fundamentally, the institution must establish:

- **$** Formal, written credit policies that articulate sound credit standards that are approved by the institution's board of directors;
- **$** Procedures to ensure that policies are communicated, understood, and faithfully executed; and
- **$** Controls at the customer level to ensure that the credit evaluations of individual customers or decisions concerning limits on interday and intraday credit extensions are followed.

Identification of customers, correspondents, and counterparties

A depository institution should review its customers' payment activity to identify those customers that are active users of payment services. These customers should be classified according to the peak value of payments and the types of services used, such as large-dollar funds transfers, book-entry government securities transfers, other large-dollar securities services (such as commercial paper), ACH, and check. It is important to be familiar with the types of payments

services that each customer uses because of the unique risks that various services may pose to the depository institution. A brief introduction to the risks associated with various types of payments as well as the types of controls that might be used to protect against those risks is provided in Section VII.

A depository institution should also review the financial condition of correspondents with which it transacts business such as clearing checks, obtaining securities safekeeping services, and obtaining securities transfer services. The institution should assure itself, on a regular basis, that the financial condition of all correspondents is satisfactory. If signs of deterioration are observed, steps should be taken to reduce balances and the volume of activity conducted through the correspondent.

In addition, an institution should evaluate its counterparties on all large-dollar clearing and settlement systems that require participants to set bilateral credit limits with each other participant. Some clearing and settlement systems, such as securities depositories and ACH systems, manage the credit risk posed by participants centrally. In these systems, individual participants may not be able to control explicitly the exposure they face from other participants by setting credit limits. For these types of systems, institutions should assess the potential exposure they face due to a participant's default by assessing the value of transactions exchanged with other participants or the loss allocation methodology employed by the system. Institutions should assure themselves that they have the ability to fund a change in their settlement position in the event that a participant on such a system were unable to settle.

Assessment of customer, correspondent, and counterparty creditworthiness

For all account-holders that are identified as being active users of payment services, whether they are financial institutions or corporate customers, the institution should evaluate each customer's creditworthiness and determine the amount of intraday credit it is willing to provide to each customer. The establishment of intraday credit limits should be consistent with the institution's overall relationship with the customer. In addition, such credit limits should be set conservatively and should not exceed a customer's typical payment needs, even if the customer has a very high credit rating. Credit limits should be comprehensive and cover all payments processed on behalf of each customer. Further, for customers that use ACH services or other services that create interday risk, interday credit limits (or prefunding requirements that would preclude credit extensions) for such services should be established as well.

If an institution deals with correspondents, the institution should determine the value of transactions cleared through each correspondent as well as other exposures that it faces from each correspondent and establish limits on those exposures that reflect the institution's assessment of the creditworthiness of each correspondent. In the case of counterparties on privately operated large-dollar clearing and settlement systems, depository institutions should determine the amount of credit they are willing to extend to each of the other participants on the system. These limits should be set conservatively and they should take into consideration other exposures to the counterparty, such as correspondent and respondent relationships and other privately operated systems on which the institution participates.

For account-holders as well as correspondents and counterparties on private clearing and settlement systems, changes in payment practices as well as changes in financial condition should be monitored on a regular basis. If changes are identified, steps should be taken to reassess credit limits, direct payment activity to other depository institutions, change bilateral credit limits, or modify the methods used to control the payment services provided to the institution.

Monitoring customer activity

Once the active customers have been identified, the systems used to monitor those customers' payment activity, both intraday and interday, should be reviewed. These systems need not be complex automated systems that fully integrate every conceivable transaction. Rather, the systems should monitor and control all significant transactions processed for the customer. It is reasonable to assume that all large-dollar funds and book-entry securities transfers should be included in any monitoring system. If the customer collects high-dollar volumes of checks, uses the ACH mechanism extensively, makes large cash deposits, or is an active participant in securities markets, such activity should also be reflected in monitoring systems. Additionally, if it is decided not to include certain types of transactions in monitoring systems on a regular basis, procedures should be established to track other transactions that might materially affect the customers' use of intraday and interday credit.

In many depository institutions, separate monitoring systems have been established to monitor customer activity by type of business, such as funds activity or government securities activity, or to monitor each of a customer's accounts separately. While such approaches can be used to control risk through the allocation of credit limits among the various monitoring systems, they do not permit institutions to observe closely the aggregate position of a customer and to identify unusual behavior quickly. Attempts should be made to establish interfaces among diverse monitoring systems. Such interfaces could be achieved by providing access to all monitoring systems to the account officer or by designating a primary system to which data could be fed from other systems periodically to provide one consolidated view of customers' intraday and interday positions.

Intraday Payment Activity. Intraday monitoring systems should reflect the customer's opening balance at the beginning of the day, and material transactions should be posted to the account as information regarding the transactions becomes available throughout the day. If certain customers are required to pledge collateral to protect the institution providing credit to them, procedures should ensure that the collateral is fully acceptable. Monitoring systems should capture the market value or other assigned value of the collateral and ensure that intraday extensions of credit are adequately secured. Further, monitoring systems must have the capability to identify any transaction that would result in a credit limit being exceeded and to hold that transaction until an account officer reviews it and determines how the transaction should be handled.

To control the risk associated with clearing and settling for book-entry securities transfers, depository institutions should assess the creditworthiness of their customers and ensure that the customer has the ability to fund consistently its daily activity. In this respect, it is important for

institutions to understand the intraday flows associated with their customer's book-entry securities activity in order to gain a good understanding of peak funding needs. Depending upon the creditworthiness of the customer and the nature of the activity, a depository institution might require its customers to take any or all of the following steps:

- **$** Advise the institution of anticipated incoming securities transfers.
- **$** Prefund all such transfers, with the understanding that any transfer not prefunded may be returned.
- **$** Collateralize all intraday overdrafts.

In accordance with Federal Reserve policy, institutions that participate in privately operated large-dollar multilateral netting systems are expected to establish and monitor bilateral net credit limits for each other participant in the system. In addition, the Federal Reserve expects individual large-dollar multilateral netting systems to establish and monitor in real time system-specific net debit limits for each participant and establish real-time controls to reject or hold any payment or foreign exchange contract that would cause a participant's position to exceed the relevant bilateral and net debit limits. Thus, an institution could choose to rely on the information provided by the system operator in order to monitor the bilateral net credit limits it has established for other participants. Nevertheless, institutions that rely on information provided by the system should ensure that the relevant limits are set appropriately and changed whenever conditions warrant.

Interday Payment Activity. To control interday risk arising from the origination of ACH credit transactions, depository institutions should also establish interday monitoring systems. The credit limits in those systems should be set in conjunction with each customer's overall interday credit limit. Depository institutions should assess the creditworthiness of their customers on a periodic basis and ensure that the established credit limits continue to be appropriate. For customers in weak financial condition, institutions should have the capability to pend or reject, in real time, transactions that would exceed credit limits for these customers.

To control the return item risk associated with originating ACH debit transactions and collecting checks on behalf of customers, a depository institution should assure itself that each customer has the capability to pay return items after it has been granted funds availability by the depository institution. In addition, if a customer's financial condition begins to deteriorate, the institution should analyze the customer's return item history and delay availability of funds or place holds on the account, as appropriate.

D. Operating Controls and Contingency Procedures

The purpose of the analysis of operating controls and contingency procedures is to assess the integrity and the reliability of a depository institution's payment operations to ensure that they are not a source of operating risk. The integrity of operations is of particular concern because

operational errors and potential fraud can increase the cost of payment services and can undermine the confidence of the public in the payments mechanism. Similar results can occur if payment systems are unreliable and parties making and receiving payments do not have confidence that payments will be made on a timely basis.

The analysis of operating controls and contingency procedures is divided into two parts. The first part discusses the principal controls that depository institutions should use in payment processing to ensure that their operations are safe and secure. The second part discusses briefly the need for sound contingency procedures as a means of increasing payments system reliability.

Controls over payment operations

Institutions providing electronic payment services should be aware of and employ a comprehensive set of controls designed to ensure the integrity of payments and the processing system, limit access to devices and systems to authorized personnel, and prevent fraudulent or erroneous messages or payments from being initiated.

Within each broad category of controls there are numerous alternative solutions that may be employed depending on the technology available, staffing levels, and the nature of the customer base. The following discussion outlines the general controls that should be implemented, the rationale for each control, and some examples of typical control arrangements.

Integrity of payments processing systems. Virtually all electronic payments systems utilize computer software to process payments. Institutions should ensure that software is tightly controlled so that it cannot be modified carelessly or for fraudulent purposes. Methods of accomplishing this include (1) using dual controls for changes to the production environment; (2) conducting extensive user testing involving a wide range of test cases; (3) limiting the number of people who have access to the system to a necessary few; (4) ensuring that the version of software that is tested is, in fact, the version put into production; and (5) limiting access to system documentation only to authorized users.

On-line access to the payments processing system. Once an electronic payments system is put into production, the ability for employees or customers to initiate transactions should be strictly limited to authorized individuals. Furthermore, the accuracy and validity of payments created by authorized staff should be regularly monitored. Methods of accomplishing this include (1) limiting physical access to payment origination facilities, such as terminals; (2) using log-on IDs and passwords; (3) changing passwords regularly and making sure they are not written down or available to others; (4) using message authentication codes to ensure that payments are not altered during storage or transmission; (5) establishing dual controls over message creation (one person keys in, another person validates); and (6) maintaining good audit trails of payments originated and received.

Off-line payment initiation and delivery processes. Most attempts at electronic payment fraud result from poor controls over off-line payment initiation or delivery, where off-line refers to the use of telephones, letters, or facsimile machines. Institutions must ensure that messages originate

from and are delivered to authorized parties. In all cases, message integrity must be maintained. Because access to a telephone or facsimile machine is difficult to control, the normal on-line access controls cannot be used. Consequently, institutions should use procedures such as (1) maintaining authorized lists of institution or customer personnel who can send or receive payments; (2) using controlled code words known only to the two parties; (3) using multi-party call-back procedures; (4) recording and monitoring telephone calls; and (5) using sequence numbering schemes for maintenance of audit trails.

Authorized staff. Care should always be taken to screen personnel employed in or with access to electronic payments areas, including programmers, analysts, computer operators, managers, clerical, and custodial staff. Management should have complete confidence in the honesty and integrity of all involved staff members. Controls, subject to appropriate statutes, that can be employed could include the following: pre-employment screening; ongoing monitoring of potential conflicts of interest; immediate removal from sensitive positions or system access of personnel who have resigned or been terminated; and specific security controls over access to offices and machines during non-business hours.

Contingency procedures

Despite the current level of automation and technology in use in the financial industry, situations arise that can cause significant interruptions in the provision of electronic payments services. These interruptions can entail outages of short duration, such as temporary losses of power and breaks in telecommunications, or longer, sometimes indefinite, outages, which may be caused by fire, flood, and earthquake. Such occurrences not only place an institution and its customers at risk, but can, in the case of a very large institution, have serious systemic risk implications. When computer systems are not operational during such events, account balances are unavailable and normal investment and trading capabilities may be interrupted.

Contingency procedures should be devised to cover three main areas of exposure: (1) hardware and software systems; (2) data communications systems; and (3) physical operations facilities. The following paragraphs outline the general areas of consideration and provide some examples of typical control arrangements.

Hardware and software systems. Virtually any hardware or software system can experience problems that cause normal processing to stop. Institutions should devise and periodically test backup procedures to ensure that processing can be resumed on a sufficiently timely basis to minimize institutional risk.

Techniques that can be employed to mitigate this risk include the following: (1) redundant hardware and software to replace or take over operations from inoperable systems (the more real-time the takeover ability, the more effective the results will be); (2) off-line backup plans, accommodating a limited number of key electronic files or payments; and (3) off-site disaster recovery facilities where computer operations can continue in case of a major outage.

Data communications systems. It is possible for telecommunications facilities to be unavailable to an institution even though computer systems are still running. Consequently, institutions should have back up facilities for all key data communications capabilities, including data security devices, to ensure that breaks in telecommunications service are not crippling for the institution's operations and services. Techniques that can be used include backup leased or dial access lines to in-house systems, external networks, and key customer locations, spare or redundant equipment for such devices as modems, encryption boxes, and controllers, and off-line communications procedures, where feasible.

Physical operations facilities. Electronic funds transfer operating areas, including the area's desks, telephones, terminals, personal computers, copying machines, and facsimile machines, could be disabled in the event of a site disaster. Planning for the continuation of these operations in a contingency situation is frequently overlooked, with potentially serious ramifications.

Consideration should be given to the following options:

- Identifying an alternate physical facility into which operations staff can be relocated;
- Developing plans to acquire or use terminals, personal computers, and other necessary office equipment; and
- Installing and testing telecommunications capabilities to the backup site.

Minimizing operating risk in a contingency situation is a difficult task that requires significant advance planning. Plans are seldom effective, however, unless they are fully documented, regularly reviewed, and tested to ensure that changes are accommodated over time, and all personnel are familiar with their responsibilities.

E. Overall Self-Assessment Rating

Table VI-3, shown on the following page, integrates the components of the self-assessment into an overall self-assessment rating that determines the institution's appropriate net debit cap category.

Table VI-3
Combined Assessment of Cap Category

Credit-worthiness	Intraday Funds Management & Control	Customer Credit Policies & Controls	Operating Controls & Contingency Procedures	Overall Assessment (Cap Category)
Excellent	Strong	Strong	Satisfactory	**High**
Excellent	Strong	Satisfactory	Satisfactory	**Above average**
Excellent	Satisfactory	Strong	Satisfactory	**Above average**
Excellent	Satisfactory	Satisfactory	Satisfactory	**Above average**
Very good	Strong	Strong	Satisfactory	**Above average**
Very good	Strong	Satisfactory	Satisfactory	**Average**
Very good	Satisfactory	Strong	Satisfactory	**Average**
Very good	Satisfactory	Satisfactory	Satisfactory	**Average**
Adequate	Strong	Strong	Satisfactory	**Average**
Adequate	Strong	Satisfactory	Satisfactory	**Average**
Adequate	Satisfactory	Strong	Satisfactory	**Average**
Adequate	Satisfactory	Satisfactory	Satisfactory	**Average**
Below standard	Any rating	Any rating	Any rating	**Zero**
Any rating	Unsatisfactory	Any rating	Any rating	**Zero**
Any rating	Any rating	Unsatisfactory	Any rating	**Zero**
Any rating	Any rating	Any rating	Unsatisfactory	**Zero**

VII. Overview of Risks Created by Major Payment Services

To evaluate the operational procedures used by depository institutions to control the risks to which they are exposed in processing payments for their own accounts or for their customers' accounts, it is necessary to understand the types of risk created by various payment vehicles. The purpose of this summary is to discuss the risks created by the use of a range of payment services and to suggest types of control procedures that might be used to protect a depository institution from the risk of loss.

Funds Transfers

Large-dollar funds transfers are typically made over Fedwire or the Clearing House Interbank Payments System (CHIPS). Institutions sending large-dollar payments over Fedwire or CHIPS are committed to settling for the payments that they send. As a result, an institution sending a payment on behalf of a customer should assure itself that its customer either has good funds in its deposit account or that it is willing to lend the customer the amount of the transfer request before initiating a request to send a Fedwire or a CHIPS transfer. Real-time verifications of customers' account balances, including credit limits that have been established for customers, if any, may be performed manually in the case of customer requests or by institutions that process a very low volume of large-dollar payments, or automatically through systems that incorporate intraday customer balances.

The Reserve Banks guarantee payment to receivers of Fedwire transfers, and those institutions are not exposed to risk if they permit their customers to use such funds as soon as they are received. In contrast, payment messages received via CHIPS are not final until CHIPS has completed settlement at the close of business. Institutions that permit their customers to make payments in anticipation of the final CHIPS settlement are exposed to the risk that CHIPS will not settle at the close of business and that, to achieve settlement, CHIPS' settlement guarantee fund would have to be used. If the defaulting participant's collateral does not cover its settlement obligation and if customers have been permitted to draw upon funds in advance of settlement, the institution might not be able to recover funds from its customers and might incur a loss. To protect against such potential losses, an institution should assess the creditworthiness of all customers that receive payments over CHIPS and determine how much credit it is willing to extend to each customer based on the receipt of CHIPS payment instructions before settlement is final.

Book-Entry Securities Transfers

When book-entry securities transfers are processed over Fedwire, the institution sending the transfer receives immediate credit in its Federal Reserve (funds) account for the payment associated with the transfer, and its securities account is correspondingly debited. The Federal Reserve (funds) account of the institution receiving a book-entry securities transfer is debited for the payment amount, and its securities account is credited. Because the institutions receiving book-entry securities transfers do not control the time at which transfers are received, it is often difficult to control daylight overdrafts caused by such activity. Thus, providing services to customers that are active participants in the secondary market for government securities or that invest in repurchase agreements might expose a depository institution to the risk of loss.

To control the risk associated with clearing and settling for large-dollar amounts of book-entry securities transfers, depository institutions should assess the creditworthiness of their customers and ensure that each customer has the ability to fund its daily activity consistently. In this respect, it is important for depository institutions to understand the intraday flows associated with their customers' book-entry activity to gain a good understanding of peak funding needs. Depending upon the creditworthiness of the customer and the nature of its activity, a depository institution might require its customers to do any or all of the following: (1) advise the institution of anticipated incoming securities transfers; (2) prefund all such anticipated transfers, with the understanding that any transfers not prefunded may be reversed; or (3) collateralize all intraday overdrafts. To smooth a customer's peak credit demands, a depository institution might consider imposing more restrictive par amount limits on all or some of its customers.

Automated Clearing House and Check Transactions

The risk inherent in the ACH mechanism is generally considered to be small compared with large-dollar funds and securities transfer systems. The ACH, however, exposes individual participants to significant risk in certain cases. The level of risk involved in processing ACH payments depends on two factors: (1) the value of the individual items being processed as well as the total value of the ACH file, and (2) the type of ACH transaction, that is, credit or debit, being processed.

ACH transaction volumes as well as the total value of ACH payments have increased each year since the development of the ACH network. Clearly, as the value of total payments increases, so does the risk to depository institutions originating ACH payments. This risk is not dependent on the individual transaction values alone, but on the value of the entire ACH file. For example, while the individual transaction value of corporate payments is usually larger than the value of individual direct deposit of payroll transactions, payroll files tend to have a far greater number of transactions and, therefore, their aggregate dollar value could be very large.

The second element that is crucial in the level and type of risks involved in the settlement of ACH payments is the type of the ACH transaction. There are two basic types of ACH

transactions: credit transactions and debit transactions. ACH credit transactions are similar to Fedwire funds transfers in that funds flow from the originator of the transaction to the receiver. In the case of ACH debit transactions, funds flow to the originator of the payment from the receiver. ACH debit transactions are very similar in nature to check transactions. They are provisional payments and receiving institutions have the right to return them.

Risks present in the check mechanism are related to the value of the underlying items as well as to the ability of payors to return these items. Return item risk will be addressed in conjunction with the discussion on ACH debit transactions.

ACH credit transactions

Depository institutions originating payments on behalf of customers have a binding commitment to make the payments when they deposit the file with an ACH processor. Since the ACH is a value-dated mechanism and transactions may be originated one or two days before the settlement day, the originating institution is exposed to temporal credit risk that can extend from one to three business days, depending upon when the customer funds the payments it originates. If the customer fails to fund the payments on the settlement day, the originating institution could suffer a financial loss. The level of exposure to potential loss faced by the originating institution is equal to the total value of payments deposited with a processor from the time the payments are deposited until the customer funds these payments.

In order for institutions originating ACH credit transactions to be able to minimize their exposure to financial loss, the following controls are suggested:

- **$** Perform a credit assessment of all customers originating large dollar volumes of ACH credit transactions. This credit assessment should be reviewed periodically to ensure that recent economic conditions having a possible impact on customers' financial position are taken into consideration.

- **$** Establish interday credit limits for all originating customers. Credit limits should be based on all credit relationships between the depository institution and its customers.

- **$** Monitor compliance with the credit limit across all processing cycles for a given settlement date. If a file of payments were to cause the credit limit to be exceeded, a conscious determination should be made by an officer of the depository institution after a review of the financial condition of the customer on whether the file should be deposited with a processor or returned to the customer.

- **$** If the customer's financial condition is deteriorating, the originating institution should require the customer either to prefund its account,

provide collateral, or deposit the ACH file on the night cycle preceding the settlement day.

A depository institution that uses a third party to process ACH payments initiated by the institution's customers should monitor its customers using the same controls described above for institutions originating ACH credit transactions.

ACH debit transactions and checks

The major risk facing institutions that originate ACH debit transactions and collect checks for customers is return item risk. Receivers of ACH debit transactions and payors of checks have the right to return transactions for various reasons, such as insufficient funds in the account, account closed, and so forth. Therefore, the risk faced by depository institutions originating ACH debit transactions or collecting checks depends on when they grant funds availability for the transactions to their customers. Return item risk extends from the day funds are made available to customers until the individual return items are received.

In order for depository institutions originating ACH debit transactions and institutions collecting checks to be able to minimize their exposure to financial loss, the following controls should be instituted:

- **$** Perform a credit assessment of all customers originating large dollar volumes of ACH debit transactions with the institution or for whom the institution collects large dollar volumes of checks. This credit assessment should be reviewed periodically to ensure that if ACH or check items are returned after the customer has been granted use of the funds, the customer will be able to return the funds to the institution.

- **$** If the customer's financial condition is deteriorating, the institution originating ACH debit transactions or collecting checks should analyze the customer's return history and delay availability of funds or place holds on the account, accordingly.